1
00:02:15,430 --> 00:00:23,950
[Music]

2
00:02:20,869 --> 00:02:17,670
this is mission control houston you're

3
00:02:23,110 --> 00:02:20,879
looking live at launch pad 0a at the

4
00:02:25,270 --> 00:02:23,120
mid-atlantic regional spaceport on

5
00:02:27,430 --> 00:02:25,280
wallops island virginia

6
00:02:30,309 --> 00:02:27,440
this view of northrop grumman's and

7
00:02:34,229 --> 00:02:30,319
harry's rocket poised on top of the pad

8
00:02:36,710 --> 00:02:34,239
towering 133 feet tall fully fueled

9
00:02:39,110 --> 00:02:36,720
ready to launch over 8 000 pounds of

10
00:02:41,350 --> 00:02:39,120
research fresh food technology

11
00:02:43,430 --> 00:02:41,360
demonstrations and supplies to the

12
00:02:46,070 --> 00:02:43,440
international space station

13
00:02:49,589 --> 00:02:46,080

this is northrop grumman's crs 17

14
00:02:53,030 --> 00:02:49,599
mission and liftoff is set for 11 40 and

15
00:02:55,910 --> 00:02:53,040
3 seconds am central time 12 40 and 3

16
00:03:04,149 --> 00:02:55,920
seconds pm eastern time at the start of

17
00:03:08,710 --> 00:03:06,229
the first stage is already loaded with

18
00:03:11,990 --> 00:03:08,720
its fuel to launch into space liquid

19
00:03:15,030 --> 00:03:12,000
oxygen and rp1 kerosene the second stage

20
00:03:18,070 --> 00:03:15,040
of antares is a solid rocket motor lc

21
00:03:19,750 --> 00:03:18,080
prep 2 hss asc is paused the weather

22
00:03:22,070 --> 00:03:19,760
conditions for today's launch are

23
00:03:24,710 --> 00:03:22,080
looking good it's currently 45 degrees

24
00:03:30,949 --> 00:03:24,720
and partly cloudy with winds at about 18

25
00:03:35,910 --> 00:03:32,949
teams all across the united states are

26
00:03:37,670 --> 00:03:35,920
supporting today's ng-17 launch

27
00:03:39,430 --> 00:03:37,680
at the wallops flight facility in

28
00:03:41,589 --> 00:03:39,440
wallops virginia which you see on your

29
00:03:43,750 --> 00:03:41,599
screen here northrop grumman engineers

30
00:03:47,350 --> 00:03:43,760
are monitoring today's countdown from

31
00:03:48,550 --> 00:03:47,360
the range control center copy that lead

32
00:03:50,070 --> 00:03:48,560
to you can resume

33
00:03:54,390 --> 00:03:50,080
they'll be counting down and walking us

34
00:03:55,910 --> 00:03:54,400
through the next 23 minutes until launch

35
00:03:57,910 --> 00:03:55,920
and they'll be in the control room from

36
00:04:00,070 --> 00:03:57,920
the point of liftoff to when the cygnus

37
00:04:02,390 --> 00:04:00,080
resupply craft separates from the

38
00:04:05,190 --> 00:04:02,400

vehicle's second stage the complete

39
00:04:07,509 --> 00:04:05,200
steps through step 385

40
00:04:09,830 --> 00:04:07,519
just moments ago a poll was conducted of

41
00:04:15,190 --> 00:04:09,840
the engineering systems and everything

42
00:04:20,229 --> 00:04:17,430
also supporting today's cargo resupply

43
00:04:22,150 --> 00:04:20,239
mission is the team in dulles virginia

44
00:04:24,469 --> 00:04:22,160
here another team of northrop grumman

45
00:04:26,310 --> 00:04:24,479
engineers are standing by ready to take

46
00:04:29,030 --> 00:04:26,320
over the flight of cygnus after

47
00:04:30,950 --> 00:04:29,040
spacecraft separation occurs in mars

48
00:04:35,110 --> 00:04:30,960
tell i'll wait for your call back when

49
00:04:39,590 --> 00:04:37,110
the destination for cygnus following

50
00:04:41,670 --> 00:04:39,600
launch today and a two-day orbit is the

51
00:04:43,590 --> 00:04:41,680
international space station

52
00:04:45,590 --> 00:04:43,600
teams in mission control houston are

53
00:04:47,670 --> 00:04:45,600
also monitoring the operations of the

54
00:04:49,270 --> 00:04:47,680
space station and watching today's

55
00:04:51,430 --> 00:04:49,280
launch

56
00:04:53,990 --> 00:04:51,440
roger that we'll check 389 the flight

57
00:04:54,830 --> 00:04:54,000
director during this orbit 2 shift is

58
00:04:59,909 --> 00:04:54,840
judd

59
00:05:04,469 --> 00:05:02,310
go ahead lc yeah provide status of cold

60
00:05:06,790 --> 00:05:04,479
helium bottle supply pressure

61
00:05:10,150 --> 00:05:06,800
yeah we're still monitoring lc uh we'll

62
00:05:11,749 --> 00:05:10,160
make a call between now and l minus 16

63
00:05:13,830 --> 00:05:11,759

the crew on board the international

64
00:05:16,230 --> 00:05:13,840
space station is enjoying their weekend

65
00:05:17,670 --> 00:05:16,240
with a day off involved with cleaning

66
00:05:19,670 --> 00:05:17,680
and exercising

67
00:05:21,029 --> 00:05:19,680
there are currently seven human beings

68
00:05:23,110 --> 00:05:21,039
living and working aboard the

69
00:05:25,270 --> 00:05:23,120
international space station as part of

70
00:05:26,950 --> 00:05:25,280
expedition 66.

71
00:05:29,990 --> 00:05:26,960
from left to right they are nasa

72
00:05:32,310 --> 00:05:30,000
astronaut raj achary and tom marshburn

73
00:05:33,189 --> 00:05:32,320
european space agency astronaut matthias

74
00:05:35,990 --> 00:05:33,199
maurer

75
00:05:37,670 --> 00:05:36,000
rose cosmos cosmonauts anton shkaplerov

76
00:05:39,749 --> 00:05:37,680
and piotr dubrov

77
00:05:41,749 --> 00:05:39,759
and nasa astronauts kayla barron and

78
00:05:43,430 --> 00:05:41,759
mark vandehei

79
00:05:45,350 --> 00:05:43,440
mandahai is in the midst of a

80
00:05:46,870 --> 00:05:45,360
record-breaking space flight in which he

81
00:05:49,110 --> 00:05:46,880
will become the american with the

82
00:05:50,950 --> 00:05:49,120
longest single space flight

83
00:05:54,070 --> 00:05:50,960
he's on his way to surpassing christina

84
00:05:57,189 --> 00:05:54,080
cook's 328-day mission which he'll break

85
00:06:00,469 --> 00:05:57,199
on march 3rd and on march 15th he'll

86
00:06:01,990 --> 00:06:00,479
break scott kelly's record of 340 days

87
00:06:03,510 --> 00:06:02,000
in space

88
00:06:06,230 --> 00:06:03,520

when vanda high returns to earth on

89
00:06:07,550 --> 00:06:06,240
march 30 30th he will have spent a

90
00:06:27,909 --> 00:06:07,560
record-breaking

91
00:06:32,230 --> 00:06:29,990
we're t minus 20 minutes and counting

92
00:06:33,909 --> 00:06:32,240
until today's launch no issues being

93
00:06:35,270 --> 00:06:33,919
worked by the flight control team at

94
00:06:37,189 --> 00:06:35,280
wallops

95
00:06:40,390 --> 00:06:37,199
it is a tradition for each cygnus

96
00:06:42,550 --> 00:06:40,400
vehicle to be named after a significant

97
00:06:45,830 --> 00:06:42,560
space explorer who contributed to human

98
00:06:50,790 --> 00:06:47,749
today's cygnus being launched is named

99
00:06:52,870 --> 00:06:50,800
the ss piers sellers after late nasa

100
00:06:55,430 --> 00:06:52,880
astronaut and climate scientist pierre

101
00:07:00,950 --> 00:06:57,830
piers seller sellers began his career at

102
00:07:03,870 --> 00:07:00,960
nasa in 1982 and flew three times on the

103
00:07:07,270 --> 00:07:03,880
space shuttle aboard sts-112

104
00:07:09,749 --> 00:07:07,280
sts-121 and sts-132

105
00:07:11,189 --> 00:07:09,759
in total pierce sellers spent nearly 35

106
00:07:13,189 --> 00:07:11,199
days in space

107
00:07:15,110 --> 00:07:13,199
and as an astronaut he helped build the

108
00:07:17,670 --> 00:07:15,120
international space station over the

109
00:07:42,230 --> 00:07:17,680
course of six spacewalks totaling 41

110
00:07:47,189 --> 00:07:45,270
we're t minus 19 minutes and counting to

111
00:07:51,270 --> 00:07:47,199
today's launch no issues being worked by

112
00:07:54,550 --> 00:07:52,070
and

113
00:07:56,550 --> 00:07:54,560

it joining us today is a special guest

114
00:07:57,510 --> 00:07:56,560
from northrop grumman to discuss today's

115
00:08:00,070 --> 00:07:57,520
launch

116
00:08:02,390 --> 00:08:00,080
christina halloma is the antares systems

117
00:08:04,710 --> 00:08:02,400
engineering program manager christina

118
00:08:07,270 --> 00:08:04,720
welcome

119
00:08:09,350 --> 00:08:07,280
thank you sandra i'm excited to be here

120
00:08:10,869 --> 00:08:09,360
and i just like to welcome all of you

121
00:08:13,029 --> 00:08:10,879
watching here in the united states and

122
00:08:14,869 --> 00:08:13,039
around the world to see a successful

123
00:08:45,110 --> 00:08:14,879
antares launch on sickness mission to

124
00:08:49,509 --> 00:08:47,350
we're getting a look at the pad now of

125
00:08:51,030 --> 00:08:49,519
the antares rocket christina can you

126
00:08:52,150 --> 00:08:51,040
tell us some of the milestones we can

127
00:08:55,269 --> 00:08:52,160
look toward

128
00:08:57,829 --> 00:08:55,279
forward to ahead of today's launch

129
00:09:00,230 --> 00:08:57,839
yes so sandra there's still quite a few

130
00:09:02,310 --> 00:09:00,240
um pre-launch milestones that are left

131
00:09:04,470 --> 00:09:02,320
here right before we launch

132
00:09:07,269 --> 00:09:04,480
for example we are currently at the tail

133
00:09:09,430 --> 00:09:07,279
end of the propellant loading operations

134
00:09:11,269 --> 00:09:09,440
when that is complete the team will top

135
00:09:12,470 --> 00:09:11,279
off the propellant and do some fuel

136
00:09:15,910 --> 00:09:12,480
adjustments

137
00:09:18,150 --> 00:09:15,920
and then we'll do a final go no-go poll

138
00:09:20,630 --> 00:09:18,160

that will be completed to proceed

139
00:09:23,190 --> 00:09:20,640
to final countdown here before launch

140
00:09:25,190 --> 00:09:23,200
and then at approximately three minutes

141
00:09:28,150 --> 00:09:25,200
before we launch the auto sequence will

142
00:09:30,630 --> 00:09:28,160
be initiated um that is where antares

143
00:09:33,750 --> 00:09:30,640
internal flight computers take over and

144
00:09:35,110 --> 00:09:33,760
and commands the vehicle so the auto

145
00:09:37,269 --> 00:09:35,120
auto sequencer then goes through the

146
00:09:38,550 --> 00:09:37,279
final steps of prepping the vehicle for

147
00:09:40,550 --> 00:09:38,560
launch and will proceed through the

148
00:09:42,949 --> 00:09:40,560
final countdown

149
00:09:45,110 --> 00:09:42,959
but after liftoff our team will be

150
00:09:48,470 --> 00:09:45,120
monitoring also monitor some post launch

151
00:09:50,630 --> 00:09:48,480
milestones the first milestone will be

152
00:09:53,509 --> 00:09:50,640
us waiting for the main engines to burn

153
00:09:56,470 --> 00:09:53,519
and that'll happen for approximately 200

154
00:09:58,550 --> 00:09:56,480
seconds until our main engine cut off

155
00:10:00,630 --> 00:09:58,560
and then once we get to the main engine

156
00:10:02,630 --> 00:10:00,640
cutoff we'll go into a short post right

157
00:10:05,590 --> 00:10:02,640
before we separate from stage one from

158
00:10:07,590 --> 00:10:05,600
stage two which we call the upper stack

159
00:10:09,430 --> 00:10:07,600
portion of antares

160
00:10:10,470 --> 00:10:09,440
after that we'll continue to coast a

161
00:10:12,389 --> 00:10:10,480
little bit

162
00:10:14,310 --> 00:10:12,399
and then about 30 seconds before staring

163
00:10:15,509 --> 00:10:14,320

at separation

164
00:10:17,030 --> 00:10:15,519
and then we'll have an internal

165
00:10:19,590 --> 00:10:17,040
separation where the stage two flies out

166
00:10:21,910 --> 00:10:19,600
of the external upper stack

167
00:10:23,990 --> 00:10:21,920
once we when stage two is clear of the

168
00:10:26,310 --> 00:10:24,000
upper stack the stage two will ignite

169
00:10:27,990 --> 00:10:26,320
for about two and a half minute burn

170
00:10:29,990 --> 00:10:28,000
that puts cygnus real close to their

171
00:10:31,750 --> 00:10:30,000
orbit and then i'll coast ensure

172
00:10:33,590 --> 00:10:31,760
everything is stable and then signals

173
00:10:34,710 --> 00:10:33,600
will be released to the into the desired

174
00:10:36,389 --> 00:10:34,720
orbit

175
00:10:38,150 --> 00:10:36,399
um and then after cygnus is released

176
00:10:39,829 --> 00:10:38,160
they'll go through their own contracts

177
00:10:41,670 --> 00:10:39,839
and then about an hour or hour and a

178
00:10:43,190 --> 00:10:41,680
half after we separate

179
00:10:45,030 --> 00:10:43,200
cygnus will then release its solar

180
00:10:47,670 --> 00:10:45,040
arrays and be on its way to the

181
00:10:49,910 --> 00:10:47,680
international space station so

182
00:10:51,750 --> 00:10:49,920
all in all from launch into significance

183
00:10:53,030 --> 00:10:51,760
to its orbit is approximately nine

184
00:10:54,710 --> 00:10:53,040
minutes so

185
00:10:56,870 --> 00:10:54,720
it'll be fun to watch here uh post

186
00:10:58,949 --> 00:10:56,880
launch

187
00:11:01,269 --> 00:10:58,959
it sure will and christina this cygnus

188
00:11:03,190 --> 00:11:01,279

mission is unique and it has reboost

189
00:11:05,190 --> 00:11:03,200
capability can you discuss the cygnus

190
00:11:06,550 --> 00:11:05,200
reboost capability planned during this

191
00:11:08,870 --> 00:11:06,560
mission

192
00:11:11,190 --> 00:11:08,880
yes so sandra in addition to delivering

193
00:11:13,190 --> 00:11:11,200
more than the 8 000 pounds of critical

194
00:11:15,829 --> 00:11:13,200
cargo to the international to the

195
00:11:18,069 --> 00:11:15,839
astronauts living on the iss

196
00:11:19,910 --> 00:11:18,079
the northrop grumman cygnus spacecraft

197
00:11:22,710 --> 00:11:19,920
spacecraft will perform its first

198
00:11:24,389 --> 00:11:22,720
operational iss reboost

199
00:11:25,910 --> 00:11:24,399
reboosting is a critical part of

200
00:11:27,750 --> 00:11:25,920
altitude maintenance for the

201
00:11:29,750 --> 00:11:27,760
international space station

202
00:11:31,990 --> 00:11:29,760
what happens is the earth's atmosphere

203
00:11:35,269 --> 00:11:32,000
causes a slight amount of drag causing

204
00:11:36,550 --> 00:11:35,279
the station orbit to decay over time so

205
00:11:38,389 --> 00:11:36,560
northrop grumman will perform the

206
00:11:40,470 --> 00:11:38,399
adjustment service while cygnus is

207
00:11:42,949 --> 00:11:40,480
actually birthed with the station

208
00:11:45,910 --> 00:11:42,959
so small precise nudges are required to

209
00:11:48,150 --> 00:11:45,920
place the iss back into its proper orbit

210
00:11:49,990 --> 00:11:48,160
and uh northrop grumman is very proud to

211
00:11:51,829 --> 00:11:50,000
offer the standard service to nasa

212
00:11:53,829 --> 00:11:51,839
today's operation

213
00:11:57,190 --> 00:11:53,839

thank you very much christina christina

214
00:12:01,750 --> 00:11:57,200
haloma with us today by phone and uh gnc

215
00:12:07,829 --> 00:12:05,350
go ahead lc yeah step 405 provide status

216
00:12:10,150 --> 00:12:07,839
trajectory file for launch operation

217
00:12:12,470 --> 00:12:10,160
now inside 15 minutes until launch

218
00:12:14,870 --> 00:12:12,480
everything continues to proceed on track

219
00:12:15,910 --> 00:12:14,880
for today's liftoff scheduled at 11 40

220
00:12:18,470 --> 00:12:15,920
and 3

221
00:12:21,590 --> 00:12:18,480
seconds central time 12 40 and three

222
00:12:23,990 --> 00:12:21,600
seconds eastern time

223
00:12:26,629 --> 00:12:24,000
lc core one on countdown one go ahead

224
00:12:29,590 --> 00:12:26,639
core one so i've got step 397 for you

225
00:12:32,790 --> 00:12:29,600
fuel level adjustment is not required

226
00:12:38,470 --> 00:12:32,800
copy that check 397 complete

227
00:12:41,110 --> 00:12:38,480
and uh prop 2 step 398 is uh

228
00:12:43,590 --> 00:12:41,120
go for arm occs for no adjustment to

229
00:12:50,550 --> 00:12:43,600
fuel level

230
00:12:55,030 --> 00:12:52,790
and occs

231
00:12:57,750 --> 00:12:55,040
at this hour propellant loading is now

232
00:13:00,949 --> 00:12:59,509
everything continues to be green across

233
00:13:02,150 --> 00:13:00,959
the board at wallops the weather is

234
00:13:04,150 --> 00:13:02,160
looking good

235
00:13:05,590 --> 00:13:04,160
everything all set for antares to begin

236
00:13:07,829 --> 00:13:05,600
its flight to deliver the cygnus

237
00:13:11,509 --> 00:13:07,839
resupply vehicle to its preliminary

238
00:13:17,509 --> 00:13:11,519

orbit now less than 14 minutes from now

239
00:13:24,310 --> 00:13:21,110
step 406 not required step 407 not

240
00:13:28,470 --> 00:13:26,310
and launching will be coming up on our

241
00:13:37,910 --> 00:13:28,480
poll to proceed with final countdown a

242
00:14:12,470 --> 00:13:40,069
and cmd i'll wait for your call on step

243
00:14:16,949 --> 00:14:14,829
t minus 13 minutes and

244
00:14:19,350 --> 00:14:16,959
counting this is in launch mode and

245
00:14:23,670 --> 00:14:19,360
nominal copy that cmd we'll check 408

246
00:14:28,069 --> 00:14:25,509
okay uh launch team

247
00:14:31,350 --> 00:14:28,079
step 409 at this time i want to pull to

248
00:14:35,269 --> 00:14:31,360
proceed with final countdown gso

249
00:14:37,269 --> 00:14:35,279
gso go rsl rso is go

250
00:14:39,590 --> 00:14:37,279
td tv scale

251
00:14:42,710 --> 00:14:39,600
prop lead properly disco

252
00:14:46,310 --> 00:14:44,470
standby one lc

253
00:14:48,150 --> 00:14:46,320
mes1

254
00:14:49,189 --> 00:14:48,160
muf1 is go

255
00:14:51,910 --> 00:14:49,199
gc

256
00:14:53,430 --> 00:14:51,920
ace

257
00:14:56,949 --> 00:14:53,440
hey cisco

258
00:15:00,870 --> 00:14:56,959
mars mars is go stage one let's go stage

259
00:15:02,310 --> 00:15:00,880
one is go cmd cmd is go ld

260
00:15:03,670 --> 00:15:02,320
ld is go

261
00:15:05,430 --> 00:15:03,680
ng

262
00:15:06,870 --> 00:15:05,440
north of government is proud to honor

263
00:15:08,949 --> 00:15:06,880

renowned nasa astronaut and

264
00:15:10,310 --> 00:15:08,959
climatologist pure sellers

265
00:15:11,990 --> 00:15:10,320
throughout his career peers make

266
00:15:13,910 --> 00:15:12,000
timeless contributions to earth and

267
00:15:15,910 --> 00:15:13,920
climate science and his research

268
00:15:18,150 --> 00:15:15,920
revolutionized the methods for utilizing

269
00:15:19,670 --> 00:15:18,160
satellite data and analytics to increase

270
00:15:21,829 --> 00:15:19,680
our understanding of earth's spiral

271
00:15:24,550 --> 00:15:21,839
sphere and changing climate

272
00:15:26,790 --> 00:15:24,560
with unbridled optimism dedication and

273
00:15:29,509 --> 00:15:26,800
passion for the future sustainability of

274
00:15:31,590 --> 00:15:29,519
our ecosystem peers relentlessly strive

275
00:15:33,509 --> 00:15:31,600
for the betterment of humankind

276
00:15:35,030 --> 00:15:33,519
it is therefore an honor to return his

277
00:15:37,430 --> 00:15:35,040
legacy to the international space

278
00:15:39,829 --> 00:15:37,440
station that he helped to construct as

279
00:15:42,550 --> 00:15:39,839
the ss pure sellers and northrop grumman

280
00:15:44,470 --> 00:15:42,560
are go for launch

281
00:15:48,150 --> 00:15:44,480
cabinet ng and we are going to proceed

282
00:15:50,069 --> 00:15:48,160
with final countdown check step 409

283
00:15:53,189 --> 00:15:50,079
and launch team will be coming up on

284
00:15:54,710 --> 00:15:53,199
engine evacuation in just a few seconds

285
00:15:58,710 --> 00:15:54,720
here

286
00:16:01,030 --> 00:15:58,720
and hashtag godspeed little noni

287
00:16:03,030 --> 00:16:01,040
and with that poll we are go for today's

288
00:16:05,350 --> 00:16:03,040

launch of an uncrewed northrop grumman

289
00:16:07,509 --> 00:16:05,360
cygnus cargo resupply vehicle named the

290
00:16:09,509 --> 00:16:07,519
ss piers sellers to head to the

291
00:16:11,590 --> 00:16:09,519
international space station

292
00:16:13,749 --> 00:16:11,600
evacuation started

293
00:16:36,550 --> 00:16:13,759
now under 11 minutes until today's

294
00:16:40,150 --> 00:16:38,470
following launch today cygnus will spend

295
00:16:42,710 --> 00:16:40,160
about two days catching up to the

296
00:16:44,629 --> 00:16:42,720
international space station cygnus is

297
00:16:46,470 --> 00:16:44,639
scheduled to be captured by the robotic

298
00:16:49,269 --> 00:16:46,480
arm of the space station in the wheat

299
00:16:51,749 --> 00:16:49,279
hours monday morning

300
00:16:54,310 --> 00:16:51,759
working out that operation will be nasa

301
00:16:56,150 --> 00:16:54,320
astronaut raja chari and nasa astronaut

302
00:16:59,110 --> 00:16:56,160
kayla baron will be backing him up from

303
00:17:01,269 --> 00:16:59,120
inside the cupola

304
00:17:03,749 --> 00:17:01,279
raj atari will use the canada arm 2 to

305
00:17:08,630 --> 00:17:03,759
reach out and grapple the cygnus vehicle

306
00:17:15,189 --> 00:17:12,470
lc mes1 step 411 vacuum verified

307
00:17:17,350 --> 00:17:15,199
cap that mes1 we can check steps 410 and

308
00:17:19,029 --> 00:17:17,360
411.

309
00:17:20,870 --> 00:17:19,039
at that point chari will turn over the

310
00:17:23,270 --> 00:17:20,880
robotic movements to a team of ground

311
00:17:25,270 --> 00:17:23,280
controllers here in houston who will

312
00:17:27,829 --> 00:17:25,280
maneuver cygnus into an installation

313
00:17:30,549 --> 00:17:27,839

position to be bolted into place on the

314
00:17:32,549 --> 00:17:30,559
earth-facing side of the unity module

315
00:17:34,549 --> 00:17:32,559
cygnus will remain at the space station

316
00:17:36,710 --> 00:17:34,559
until may where it will depart the space

317
00:17:38,710 --> 00:17:36,720
station

318
00:17:42,230 --> 00:17:38,720
and burn up harmlessly in the earth's

319
00:17:48,230 --> 00:17:44,390
our capture coverage is scheduled at 3

320
00:17:56,549 --> 00:17:48,240
35 a.m central time 4 45 a.m eastern

321
00:18:03,750 --> 00:17:59,350
apps one lc countdown one step 412 your

322
00:18:16,310 --> 00:18:06,789
acs vdm's internal power on

323
00:18:20,630 --> 00:18:19,029
ecs mediums enabled voltage nominal odm

324
00:18:23,029 --> 00:18:20,640
commands clear

325
00:18:25,830 --> 00:18:23,039
project electron we can check steps 412

326
00:18:28,070 --> 00:18:25,840
and 413.

327
00:18:29,990 --> 00:18:28,080
launch team be advised step 414 is not

328
00:18:31,750 --> 00:18:30,000
required

329
00:18:50,710 --> 00:18:31,760
now under nine minutes until today's

330
00:18:55,430 --> 00:18:52,710
and antares has been switched to

331
00:18:56,870 --> 00:18:55,440
internal power

332
00:18:58,549 --> 00:18:56,880
at about three minutes ahead of launch

333
00:19:00,310 --> 00:18:58,559
will be when the auto sequence handoff

334
00:19:02,070 --> 00:19:00,320
to terminal count occurs and the

335
00:19:03,990 --> 00:19:02,080
computers will take over for the final

336
00:19:17,029 --> 00:19:04,000
steps to get us to launch at the opening

337
00:19:40,470 --> 00:19:20,230
gn2 positioning initiated

338
00:19:44,070 --> 00:19:42,390

inside seven and a half minutes until

339
00:19:45,990 --> 00:19:44,080
today's launch you'll continue to hear

340
00:19:49,029 --> 00:19:46,000
some of these countdown milestones ahead

341
00:19:51,990 --> 00:19:50,470
and at the time of launch the

342
00:19:55,350 --> 00:19:52,000
international space station will be

343
00:19:57,830 --> 00:19:55,360
flying 261 statute miles over northern

344
00:20:02,549 --> 00:19:57,840
algeria just south of the mediterranean

345
00:20:02,559 --> 00:20:27,909
and passing t minus seven minutes

346
00:20:33,029 --> 00:20:31,190
ops 2lc step 417 you could

347
00:20:34,710 --> 00:20:33,039
initially initialize ground ordnance

348
00:20:37,750 --> 00:20:34,720
power supplies

349
00:20:41,110 --> 00:20:37,760
initialize

350
00:20:45,190 --> 00:20:41,120
lc public step 416 dcso activation

351
00:20:45,200 --> 00:20:53,990
copy lead copy ops 2.

352
00:21:12,230 --> 00:20:58,070
project electric check 416 417 and 48

353
00:21:16,470 --> 00:21:14,470
half bay ecs transfer to gn2 is

354
00:21:37,590 --> 00:21:16,480
confirmed for our stay outside control

355
00:22:02,710 --> 00:21:39,669
now coming up on the t minute

356
00:22:08,230 --> 00:22:06,070
p minus five minutes ops ii step 420

357
00:22:10,390 --> 00:22:08,240
initiate engine priming

358
00:22:12,390 --> 00:22:10,400
engine priming started

359
00:22:13,830 --> 00:22:12,400
ops one transfer avionics to internal

360
00:22:35,110 --> 00:22:13,840
power

361
00:22:37,350 --> 00:22:35,120
roger elect one check 422 in ops one

362
00:22:48,630 --> 00:22:37,360
open fts envy loop

363
00:22:54,950 --> 00:22:50,950

stlu and fts receiver indications are

364
00:22:57,750 --> 00:22:54,960
nominal roger elect two check 423 424 op

365
00:23:01,190 --> 00:22:57,760
send all arm command

366
00:23:03,750 --> 00:23:01,200
on my mark three two one mark all arm

367
00:23:06,230 --> 00:23:03,760
commands sent

368
00:23:14,710 --> 00:23:06,240
essays odms alarms

369
00:23:20,789 --> 00:23:17,669
chelsea priming verified cds

370
00:23:22,870 --> 00:23:20,799
range is green copy range green copy

371
00:23:30,549 --> 00:23:22,880
priming has been verified

372
00:23:34,470 --> 00:23:32,310
and launch team be advised phase 3

373
00:23:37,750 --> 00:23:34,480
dynamic limits will be active at t minus

374
00:23:39,430 --> 00:23:37,760
3 minutes t minus three minutes and

375
00:23:57,110 --> 00:23:39,440
thirty seconds until launch everything's

376
00:23:57,120 --> 00:24:05,190
fc commanded to flight mode

377
00:24:09,110 --> 00:24:06,870
t minus three minutes

378
00:24:10,710 --> 00:24:09,120
auto sequence start podium bus voltage

379
00:24:11,830 --> 00:24:10,720
is increasing less than three minutes

380
00:24:14,870 --> 00:24:11,840
until launch

381
00:24:18,390 --> 00:24:14,880
gnc one verify ready for nab mode

382
00:24:21,990 --> 00:24:18,400
lc gmc one we're now ready for nav and

383
00:24:30,630 --> 00:24:22,000
ops 2 step 435 switch to math

384
00:24:36,470 --> 00:24:32,710
nav telemetry verified

385
00:24:40,950 --> 00:24:36,480
copy that tnt1 check 436 and passing t

386
00:24:45,110 --> 00:24:42,870
coming up on the t minus 2 minute mark

387
00:25:05,029 --> 00:24:45,120
anterior systems in good shape there are

388
00:25:05,039 --> 00:25:33,830

t minus two minutes

389
00:26:04,950 --> 00:25:36,710
t minus 1 minute 30 seconds 90 seconds

390
00:26:04,960 --> 00:26:13,269
t-minus one minute

391
00:26:16,630 --> 00:26:14,630
less than one minute until today's

392
00:26:35,350 --> 00:26:16,640
launch at 40 seconds tanks will be

393
00:26:35,360 --> 00:26:50,310
k minus 30 seconds

394
00:26:50,320 --> 00:26:55,590
t minus 15 seconds

395
00:26:55,600 --> 00:27:01,110
t minus 10

396
00:27:03,029 --> 00:27:02,070
5

397
00:27:04,070 --> 00:27:03,039
4

398
00:27:05,029 --> 00:27:04,080
3

399
00:27:08,070 --> 00:27:05,039
2

400
00:27:08,080 --> 00:27:11,269
we have engine ignition

401
00:27:13,590 --> 00:27:12,310
and uh

402
00:27:15,190 --> 00:27:13,600
it launched vehicle from wireless flight

403
00:27:17,750 --> 00:27:15,200
facility

404
00:27:26,149 --> 00:27:17,760
this is at 100 thrust

405
00:27:31,029 --> 00:27:28,870
and we have liftoff of the ss piers

406
00:27:33,350 --> 00:27:31,039
sellers carrying over 8 000 pounds of

407
00:27:35,190 --> 00:27:33,360
cargo to the international space station

408
00:27:40,500 --> 00:27:35,200
good performance on the first stage so

409
00:28:02,549 --> 00:27:49,120
[Music]

410
00:28:07,269 --> 00:28:02,559
iii

411
00:28:07,279 --> 00:28:11,830
electrical power is nominal

412
00:28:24,070 --> 00:28:13,430
everything continuing to look good on

413
00:28:26,870 --> 00:28:25,830

passing through max q attitude remains

414
00:28:28,389 --> 00:28:26,880
home

415
00:28:30,789 --> 00:28:28,399
the first stage is now passing through

416
00:28:33,269 --> 00:28:30,799
max q the area of maximum dynamic

417
00:28:34,870 --> 00:28:33,279
pressure on the rocket now 90 seconds

418
00:28:36,870 --> 00:28:34,880
into today's flight of the northrop

419
00:28:38,470 --> 00:28:36,880
grumman cygnus resupply cargo craft

420
00:28:45,350 --> 00:28:38,480
headed to the international space

421
00:28:52,789 --> 00:28:47,190
the ng-3 now open

422
00:28:59,269 --> 00:28:54,149
coming up on the two-minute mark of

423
00:29:07,350 --> 00:29:01,029
attitude remains nominal power is

424
00:29:07,360 --> 00:29:19,110
7000 feet per second velocity

425
00:29:39,430 --> 00:29:32,389
attitude remains nominal

426
00:29:44,389 --> 00:29:41,110
continuing to get good reports from the

427
00:29:54,389 --> 00:29:44,399
range control center at wallops

428
00:29:54,399 --> 00:29:58,070
power remains nominal

429
00:29:58,080 --> 00:30:02,630
beginning slow throttle down

430
00:30:07,750 --> 00:30:05,430
pressures remain normal

431
00:30:09,510 --> 00:30:07,760
now three minutes into today's flight

432
00:30:11,510 --> 00:30:09,520
throttle down will occur three minutes

433
00:30:14,549 --> 00:30:11,520
into the flight which means main engine

434
00:30:24,230 --> 00:30:14,559
cutoff will be coming soon

435
00:30:29,110 --> 00:30:27,029
and mikko we have miko or main engine

436
00:30:30,950 --> 00:30:29,120
cut off and terry's now entering a coast

437
00:30:33,029 --> 00:30:30,960
stage

438
00:30:35,350 --> 00:30:33,039

fairing separation will occur about 30

439
00:30:37,110 --> 00:30:35,360
seconds from now

440
00:30:40,710 --> 00:30:37,120
stage one delta v

441
00:30:44,230 --> 00:30:42,710
and as we lose sight of the vehicle

442
00:30:45,909 --> 00:30:44,240
switching to our animation there are

443
00:30:47,269 --> 00:30:45,919
some controlled firings of the inner

444
00:30:49,830 --> 00:30:47,279
stage of the rocket everything

445
00:30:53,990 --> 00:30:49,840
continuing to perform as expected stage

446
00:30:54,000 --> 00:31:02,870
the vehicle remains at nominal attitude

447
00:31:06,870 --> 00:31:04,789
you have fairing separation

448
00:31:08,470 --> 00:31:06,880
bearing separation confirms cygnus now

449
00:31:10,470 --> 00:31:08,480
exposed to the atmosphere as it

450
00:31:15,509 --> 00:31:10,480
continues its trek uphill to its

451
00:31:20,470 --> 00:31:17,909
stage two ignition stage 2 ignition

452
00:31:22,549 --> 00:31:20,480
confirmed stage 2 remains nominal stage

453
00:31:29,350 --> 00:31:22,559
2 is a solid rocket motor burn for about

454
00:31:29,360 --> 00:31:45,350
tvc is nominal and power's normal

455
00:31:45,360 --> 00:31:49,750
tvc is nominal

456
00:32:13,110 --> 00:31:51,830
continuing to hear all good calls now

457
00:32:21,750 --> 00:32:15,350
stage stage 2 performance remains

458
00:32:21,760 --> 00:32:32,389
100 seconds to burn out

459
00:32:32,399 --> 00:32:49,750
vehicle attitude remains nominal

460
00:32:49,760 --> 00:33:11,190
tvc power and attitude remain nominal

461
00:33:11,200 --> 00:33:33,590
stage 2 remains nominal tvc is nominal

462
00:33:38,149 --> 00:33:36,310
stage two remains nominal

463
00:33:48,070 --> 00:33:38,159

stage two motor pressure started to tail

464
00:33:48,080 --> 00:33:56,230
vehicle attitude remains normal

465
00:34:01,509 --> 00:33:59,350
and we have stage 2 burnout

466
00:34:03,110 --> 00:34:01,519
stage 2 burnout confirmed cygnus has

467
00:34:08,230 --> 00:34:03,120
reached the preliminary orbital

468
00:34:08,240 --> 00:34:12,149
the next major event will be sicknesses

469
00:34:15,750 --> 00:34:13,909
will be cygnus's separation from the

470
00:34:18,310 --> 00:34:15,760
second stage which will occur at about

471
00:34:19,909 --> 00:34:18,320
the eight minute 51 second mark

472
00:34:21,750 --> 00:34:19,919
interiors is an orbit and will close for

473
00:34:29,750 --> 00:34:21,760
roughly 100 seconds prior to payload

474
00:34:38,629 --> 00:34:31,990
everything still performing as expected

475
00:35:02,310 --> 00:34:39,909
vehicle power and attitude remain

476
00:35:02,320 --> 00:35:22,710
antares remains nominal

477
00:35:45,510 --> 00:35:24,150
approximately 30 seconds to fail

478
00:35:45,520 --> 00:36:00,150
the latitude remains normal power normal

479
00:36:00,160 --> 00:36:04,470
and we have payload separation

480
00:36:08,790 --> 00:36:06,710
spacecraft separation confirms cygnus

481
00:36:21,030 --> 00:36:08,800
now well on its way to the international

482
00:36:21,040 --> 00:36:41,270
and stage two attitudes are normal

483
00:36:45,510 --> 00:36:43,030
you can see the excitement in the room

484
00:36:47,270 --> 00:36:45,520
there as some celebration celebratory

485
00:36:54,630 --> 00:36:47,280
fist bumps and high fives take place

486
00:36:54,640 --> 00:36:59,589
and prop 1lc countdown 1.

487
00:37:07,030 --> 00:37:01,670
i can't verify helium pulse purging is

488
00:37:13,270 --> 00:37:09,670

copy that and prop 2 can you verify

489
00:37:15,750 --> 00:37:13,280
hpgn2 supply line post launch purging

490
00:37:16,630 --> 00:37:15,760
lc prop 2 gn2

491
00:37:22,069 --> 00:37:16,640
line

492
00:37:27,510 --> 00:37:24,630
gnc one let me know when you've provided

493
00:37:30,550 --> 00:37:27,520
the state vector to cygnus and we'll

494
00:37:34,069 --> 00:37:30,560
look for confirmation from them

495
00:37:36,870 --> 00:37:34,079
uh lcg and c1 in work

496
00:37:39,030 --> 00:37:36,880
site control step 449 you can remove app

497
00:37:43,430 --> 00:37:39,040
bay gn2 flow and reconfigure ecs for

498
00:37:48,310 --> 00:37:46,550
ask bay gn2 flow is off ecs reconfigured

499
00:37:51,109 --> 00:37:48,320
for post fight

500
00:37:52,470 --> 00:37:51,119
we had a successful launch of the cygnus

501
00:37:55,589 --> 00:37:52,480
cargo vehicle

502
00:37:59,670 --> 00:37:55,599
launching at 11 40 a.m central time 12

503
00:38:02,390 --> 00:37:59,680
40 p.m eastern time today

504
00:38:04,390 --> 00:38:02,400
with it over 8 000 pounds of food fuel

505
00:38:06,150 --> 00:38:04,400
and supplies headed to the international

506
00:38:08,790 --> 00:38:06,160
space station

507
00:38:11,510 --> 00:38:08,800
arm enable rotated and arm indication no

508
00:38:12,950 --> 00:38:11,520
longer illuminated

509
00:38:15,270 --> 00:38:12,960
and i also want to disable your local

510
00:38:17,990 --> 00:38:15,280
launch enable button

511
00:38:19,589 --> 00:38:18,000
ops one launch enable removed and gso

512
00:38:21,670 --> 00:38:19,599
can you disable your local launch enable

513
00:38:23,270 --> 00:38:21,680

button

514
00:38:25,349 --> 00:38:23,280
and once cygnus arrives to the

515
00:38:27,829 --> 00:38:25,359
international space station in the early

516
00:38:31,349 --> 00:38:27,839
hours monday morning it will be grappled

517
00:38:33,190 --> 00:38:31,359
and installed and then bolted into place

518
00:38:35,349 --> 00:38:33,200
following that a series of leak checks

519
00:38:37,670 --> 00:38:35,359
at the birthing interface between cygnus

520
00:38:39,270 --> 00:38:37,680
and the unity module will be conducted

521
00:38:42,310 --> 00:38:39,280
to make sure that there's a tight seal

522
00:38:44,069 --> 00:38:42,320
between the cygnus and the station

523
00:38:46,390 --> 00:38:44,079
following that the process of hatch

524
00:38:48,950 --> 00:38:46,400
opening will begin

525
00:38:52,710 --> 00:38:48,960
ground lock external power off copy that

526
00:38:54,470 --> 00:38:52,720
and tl11 looks like we're lost this time

527
00:38:56,790 --> 00:38:54,480
pay for mlc

528
00:38:58,950 --> 00:38:56,800
okay tlm uh you can stop telemetry

529
00:39:01,750 --> 00:38:58,960
archiving at the tcom

530
00:39:03,670 --> 00:39:01,760
you can stop mcc telemetry display

531
00:39:06,390 --> 00:39:03,680
server distributor logging and you can

532
00:39:46,470 --> 00:39:06,400
stop the g2 telemetry recording

533
00:39:50,550 --> 00:39:48,230
and if you're just joining us the

534
00:39:52,470 --> 00:39:50,560
northrop grumman antares rocket lifted

535
00:39:55,750 --> 00:39:52,480
off on time from the wallops flight

536
00:39:58,390 --> 00:39:55,760
facility in virginia from launch pad 0a

537
00:40:01,510 --> 00:39:58,400
at the mid-atlantic regional spaceport

538
00:40:03,910 --> 00:40:01,520

at 11 40 a.m central time 12 40 p.m

539
00:40:05,829 --> 00:40:03,920
eastern time

540
00:40:07,829 --> 00:40:05,839
coming up in a few hours will be solar

541
00:40:09,670 --> 00:40:07,839
array deploy we won't be covering solar

542
00:40:11,910 --> 00:40:09,680
array deployment live on air but we will

543
00:40:15,990 --> 00:40:11,920
provide updates via our blog and social

544
00:40:19,589 --> 00:40:17,829
again it was a perfect ride to orbit

545
00:40:23,030 --> 00:40:19,599
cygnus now well on its way to the

546
00:40:25,270 --> 00:40:23,040
international space station with 8 300

547
00:40:43,430 --> 00:40:25,280
pounds of food fuel and supplies on

548
00:40:48,150 --> 00:40:45,990
this is mission control houston cygnus

549
00:40:50,390 --> 00:40:48,160
now safely in orbit heading to the

550
00:40:52,069 --> 00:40:50,400
international space station we had a

551
00:40:54,870 --> 00:40:52,079
smooth launch from the wallops flight

552
00:40:57,349 --> 00:40:54,880
facility in virginia and now joining us

553
00:41:00,309 --> 00:40:57,359
via phone is international space station

554
00:41:01,829 --> 00:41:00,319
operations manager dina contella dina

555
00:41:02,710 --> 00:41:01,839
welcome thanks so much for joining us

556
00:41:04,230 --> 00:41:02,720
today

557
00:41:09,589 --> 00:41:04,240
thank you for having me it's a beautiful

558
00:41:09,599 --> 00:41:39,589
how can you hear me

559
00:41:43,589 --> 00:41:41,430
thanks so much for joining us today dina

560
00:41:45,750 --> 00:41:43,599
now with a successful launch in cygnus

561
00:41:48,470 --> 00:41:45,760
on orbit what's ahead of the operation

562
00:41:49,990 --> 00:41:48,480
what's ahead for the operation teams

563
00:41:51,589 --> 00:41:50,000

well it was a beautiful launch how do

564
00:41:54,230 --> 00:41:51,599
you hear me

565
00:41:55,510 --> 00:41:54,240
i can hear you loud and clear great

566
00:41:58,150 --> 00:41:55,520
well um

567
00:42:00,309 --> 00:41:58,160
so ahead of the operations team there's

568
00:42:02,710 --> 00:42:00,319
as the cygnus will perform a rendezvous

569
00:42:05,109 --> 00:42:02,720
with iss and when it gets close enough

570
00:42:06,470 --> 00:42:05,119
on monday the crew will use the canadian

571
00:42:08,630 --> 00:42:06,480
robotic arm

572
00:42:10,309 --> 00:42:08,640
to grapple cygnus and then we'll attach

573
00:42:12,150 --> 00:42:10,319
it to iss

574
00:42:14,630 --> 00:42:12,160
and raja is primed to operate the arm

575
00:42:16,550 --> 00:42:14,640
with kayla backing him up

576
00:42:19,190 --> 00:42:16,560
and those joint operations are planned

577
00:42:21,109 --> 00:42:19,200
to start around 11 p.m

578
00:42:22,710 --> 00:42:21,119
sunday night in houston uh the joint

579
00:42:24,069 --> 00:42:22,720
operations being between iss and the

580
00:42:26,150 --> 00:42:24,079
northrop team

581
00:42:30,069 --> 00:42:26,160
and then that capture of the cygnus

582
00:42:32,710 --> 00:42:30,079
vehicle is targeted for around 3 35 a.m

583
00:42:34,870 --> 00:42:32,720
central time

584
00:42:37,430 --> 00:42:34,880
so after that capture the ground team

585
00:42:40,150 --> 00:42:37,440
will take over control the arm to birth

586
00:42:43,109 --> 00:42:40,160
sickness to the unity mater port

587
00:42:44,790 --> 00:42:43,119
and that's support that faces earth and

588
00:42:46,309 --> 00:42:44,800

we can expect the crew to be able to to

589
00:42:49,109 --> 00:42:46,319
get the hatch open that same day on

590
00:42:51,589 --> 00:42:49,119
monday and that'll be maybe around 11 20

591
00:42:53,589 --> 00:42:51,599
a.m houston time depending on how things

592
00:42:55,430 --> 00:42:53,599
are progressing uh with the onboard

593
00:42:57,349 --> 00:42:55,440
operations

594
00:42:59,750 --> 00:42:57,359
and the crew might be able to start some

595
00:43:01,190 --> 00:42:59,760
off cargo operations on monday

596
00:43:03,510 --> 00:43:01,200
but the bulk of the first critical

597
00:43:05,910 --> 00:43:03,520
transfers are expected to take place in

598
00:43:07,589 --> 00:43:05,920
earnest early starting on tuesday

599
00:43:10,790 --> 00:43:07,599
and then we're expecting to have cygnus

600
00:43:11,910 --> 00:43:10,800
attached to iss until the end of may and

601
00:43:15,030 --> 00:43:11,920
we're really looking forward to having

602
00:43:16,790 --> 00:43:15,040
all this cargo get on board

603
00:43:18,790 --> 00:43:16,800
and dena can you tell us a little bit

604
00:43:21,349 --> 00:43:18,800
about just how important it is to have

605
00:43:23,349 --> 00:43:21,359
these regular cargo flights

606
00:43:24,870 --> 00:43:23,359
well as you can imagine these flights

607
00:43:26,390 --> 00:43:24,880
are critical for supplying the science

608
00:43:27,589 --> 00:43:26,400
investigations that make the

609
00:43:30,230 --> 00:43:27,599
international space station the

610
00:43:31,750 --> 00:43:30,240
incredible research facility that it is

611
00:43:33,510 --> 00:43:31,760
and of course the cargo flights also

612
00:43:35,750 --> 00:43:33,520
provide supplies for the crew and

613
00:43:38,309 --> 00:43:35,760

critical maintenance items and hardware

614
00:43:41,349 --> 00:43:38,319
to make the changes necessary to iss to

615
00:43:43,270 --> 00:43:41,359
support new science and so just some

616
00:43:45,430 --> 00:43:43,280
examples here on this particular flight

617
00:43:47,510 --> 00:43:45,440
of research that's coming up

618
00:43:49,349 --> 00:43:47,520
some examples include investigations

619
00:43:51,030 --> 00:43:49,359
looking at the effects of a drug on

620
00:43:53,270 --> 00:43:51,040
cancer cells

621
00:43:54,630 --> 00:43:53,280
we've got investigations on skin aging

622
00:43:57,510 --> 00:43:54,640
plant growth

623
00:43:59,750 --> 00:43:57,520
we're looking at new hydrogen sensors

624
00:44:01,829 --> 00:43:59,760
and and you know this science provides

625
00:44:03,750 --> 00:44:01,839
direct benefits to those on earth as

626
00:44:06,550 --> 00:44:03,760
well as for future human space flight

627
00:44:07,349 --> 00:44:06,560
crews and and future space flights

628
00:44:12,710 --> 00:44:07,359
so

629
00:44:15,270 --> 00:44:12,720
modification kit that'll continue our

630
00:44:16,630 --> 00:44:15,280
work to upgrade the solar rays onboard

631
00:44:18,390 --> 00:44:16,640
iss

632
00:44:21,030 --> 00:44:18,400
and some other key items

633
00:44:22,470 --> 00:44:21,040
that will be needed for a new capability

634
00:44:24,150 --> 00:44:22,480
that we're excited about to dispose

635
00:44:25,750 --> 00:44:24,160
trash items through the nanoracks

636
00:44:27,270 --> 00:44:25,760
airlock to help with some of our

637
00:44:29,829 --> 00:44:27,280
logistics

638
00:44:31,589 --> 00:44:29,839

so and i just say regular cargo missions

639
00:44:34,309 --> 00:44:31,599
there's a lifeblood really of iss's

640
00:44:36,309 --> 00:44:34,319
supply chain to continue research and

641
00:44:40,470 --> 00:44:36,319
especially as we're continuing to extend

642
00:44:44,230 --> 00:44:42,309
thanks dina and is there anything in

643
00:44:45,990 --> 00:44:44,240
particular that is unique about this

644
00:44:47,670 --> 00:44:46,000
mission that you're most looking forward

645
00:44:50,950 --> 00:44:47,680
to

646
00:44:53,190 --> 00:44:50,960
well um yeah in fact this uh cygnus

647
00:44:55,990 --> 00:44:53,200
vehicle has been modified to provide a

648
00:44:57,510 --> 00:44:56,000
capability to reboost iss

649
00:44:59,910 --> 00:44:57,520
and so it just uses some of its

650
00:45:02,550 --> 00:44:59,920
propellant in the vehicle itself and

651
00:45:03,349 --> 00:45:02,560
we've done we've done a test prior to

652
00:45:07,670 --> 00:45:03,359
this

653
00:45:09,510 --> 00:45:07,680
real use of the capability to actually

654
00:45:11,829 --> 00:45:09,520
reboost the station

655
00:45:14,069 --> 00:45:11,839
and it gives us another way to do so in

656
00:45:16,069 --> 00:45:14,079
addition to the russian thrusters or the

657
00:45:18,230 --> 00:45:16,079
russian progress cargo spacecraft

658
00:45:21,910 --> 00:45:18,240
capabilities so it's great to be able to

659
00:45:26,069 --> 00:45:23,910
dina contella the international space

660
00:45:28,150 --> 00:45:26,079
station operations manager joining us

661
00:45:32,150 --> 00:45:28,160
today via phone thank you very much dina

662
00:45:34,069 --> 00:45:32,160
appreciate it all right thank you

663
00:45:36,790 --> 00:45:34,079

again we had a successful launch of

664
00:45:39,990 --> 00:45:36,800
northrop grumman's crs 17 mission on

665
00:45:55,990 --> 00:45:40,000
time today at 11 40 a.m central time 12

666
00:46:00,550 --> 00:45:58,230
to recap today's launch activities the

667
00:46:02,470 --> 00:46:00,560
northrop grumman antares rocket lifted

668
00:46:05,589 --> 00:46:02,480
off on time from the wallops flight

669
00:46:08,069 --> 00:46:05,599
facility in virginia from launch pad 0a

670
00:46:11,190 --> 00:46:08,079
at the mid-atlantic regional spaceport

671
00:46:13,510 --> 00:46:11,200
at 11 40 a.m central time 12 40 p.m

672
00:46:15,430 --> 00:46:13,520
eastern time

673
00:46:17,270 --> 00:46:15,440
coming up in a few hours will be solar

674
00:46:19,589 --> 00:46:17,280
array deployment we won't be covering

675
00:46:21,670 --> 00:46:19,599
solar array deployment live on air but

676
00:46:25,670 --> 00:46:21,680
we will provide updates via our blog and

677
00:46:29,829 --> 00:46:27,670
it was a very smooth ride to orbit

678
00:46:32,150 --> 00:46:29,839
sending the cygnus resupply vehicle to

679
00:46:34,390 --> 00:46:32,160
its preliminary orbit on route to a

680
00:46:36,309 --> 00:46:34,400
two-day rendezvous that will result in

681
00:46:38,710 --> 00:46:36,319
cygnus arriving to the international

682
00:46:40,950 --> 00:46:38,720
space station in the wheat hours monday

683
00:46:42,870 --> 00:46:40,960
morning

684
00:46:44,790 --> 00:46:42,880
we'll be covering the capture of cygnus

685
00:46:47,589 --> 00:46:44,800
and our coverage will begin at 2 a.m

686
00:46:49,190 --> 00:46:47,599
central time 3 a.m eastern time on nasa

687
00:46:51,109 --> 00:46:49,200
tv

688
00:46:53,109 --> 00:46:51,119

nasa astronaut rajatari will use the

689
00:46:57,190 --> 00:46:53,119
canada arm 2 to reach out and capture

690
00:46:59,430 --> 00:46:57,200
cygnus at 3 35 a.m central time 4 35 a.m

691
00:47:01,109 --> 00:46:59,440
eastern time

692
00:47:03,030 --> 00:47:01,119
we'll then take a little pause come back

693
00:47:04,950 --> 00:47:03,040
a couple of hours later for installation

694
00:47:07,270 --> 00:47:04,960
coverage where cygnus will be turned

695
00:47:09,190 --> 00:47:07,280
over to the robotic ground controllers

696
00:47:11,750 --> 00:47:09,200
here in houston to install and bolt

697
00:47:13,349 --> 00:47:11,760
cygnus into place on the earth-facing

698
00:47:16,870 --> 00:47:13,359
port of the unity module of the

699
00:47:21,829 --> 00:47:18,950
our installation coverage will begin at

700
00:47:25,190 --> 00:47:21,839
5 am central time 6 a.m eastern time on

701
00:47:27,190 --> 00:47:25,200
monday morning

702
00:47:29,430 --> 00:47:27,200
with that we'll wrap up our coverage of

703
00:47:31,750 --> 00:47:29,440
today's liftoff of the antares rocket

704
00:47:34,230 --> 00:47:31,760
from wallops to send cygnus into its

705
00:47:35,990 --> 00:47:34,240
preliminary orbit from all of us in

706
00:47:37,910 --> 00:47:36,000
mission control houston have a great

707
00:47:40,150 --> 00:47:37,920
weekend and thanks so much for joining

708
00:47:45,420 --> 00:47:40,160
us today we'll see you again on monday