

CAM 15

291 23:45:39.696



1
00:00:02,800 --> 00:00:07,190
minus 10 seconds

2
00:00:08,950 --> 00:00:07,990
10

3
00:00:09,750 --> 00:00:08,960
9

4
00:00:10,709 --> 00:00:09,760
8

5
00:00:11,749 --> 00:00:10,719
7

6
00:00:12,789 --> 00:00:11,759
6

7
00:00:13,830 --> 00:00:12,799
5

8
00:00:14,870 --> 00:00:13,840
4

9
00:00:15,829 --> 00:00:14,880
3

10
00:00:23,910 --> 00:00:15,839
2

11
00:00:28,790 --> 00:00:26,470
and as you can see cygnus lifting off on

12
00:00:31,029 --> 00:00:28,800
top of its antares rocket on its mission

13
00:00:40,790 --> 00:00:31,039

to deliver supplies and science to the

14

00:00:44,470 --> 00:00:42,630

first stage is now burning and will burn

15

00:00:45,510 --> 00:00:44,480

for three minutes and 20 seconds of

16

00:00:48,950 --> 00:00:45,520

flight

17

00:00:51,830 --> 00:00:50,310

just about three and a half minutes into

18

00:00:54,389 --> 00:00:51,840

the flight

19

00:00:56,069 --> 00:00:54,399

that provides the initial thrust to get

20

00:01:00,630 --> 00:00:56,079

cygnus going on its

21

00:01:00,640 --> 00:01:04,229

altitude

22

00:01:08,550 --> 00:01:06,710

engines are traveling

23

00:01:10,789 --> 00:01:08,560

now more than 10 000 feet above the

24

00:01:23,510 --> 00:01:10,799

earth and

25

00:01:28,070 --> 00:01:25,109

nominal chamber pressure on the main

26
00:01:34,149 --> 00:01:30,310
power remains nominal altitude passing

27
00:01:41,910 --> 00:01:35,910
engines remain nominal as two poor

28
00:01:47,109 --> 00:01:44,550
crowd watching the uh launch at wallops

29
00:01:49,190 --> 00:01:47,119
there uh cheering its lift off we're now

30
00:01:51,670 --> 00:01:49,200
one minute and 30 seconds into flight

31
00:01:53,990 --> 00:01:51,680
another minute and a half to

32
00:01:55,749 --> 00:01:54,000
two minutes to go until the first main

33
00:01:57,990 --> 00:01:55,759
engine cut off coming at three minutes

34
00:02:10,869 --> 00:01:58,000
and 28 seconds but everything proceeding

35
00:02:10,879 --> 00:02:13,510
at this point

36
00:02:13,520 --> 00:02:20,470
attitude remains a nominal

37
00:02:27,030 --> 00:02:24,949
just passing 100 000 feet in altitude

38
00:02:29,670 --> 00:02:27,040

stage 1 systems continue to perform very

39

00:02:29,680 --> 00:02:37,990

vehicle attitude is nominal

40

00:02:43,030 --> 00:02:39,910

engines and core pressure remain nominal

41

00:02:46,949 --> 00:02:45,270

avionics systems continue to look good

42

00:02:48,790 --> 00:02:46,959

healthy power systems

43

00:02:50,550 --> 00:02:48,800

two and a half minutes into flight uh

44

00:02:51,830 --> 00:02:50,560

less than or just over a minute left to

45

00:02:59,190 --> 00:02:51,840

go before

46

00:03:06,869 --> 00:03:02,710

altitude just passing 200 000 feet

47

00:03:06,879 --> 00:03:12,229

we started our slow throttle transition

48

00:03:16,470 --> 00:03:13,910

attitude and core pressures remain

49

00:03:16,480 --> 00:03:22,070

roughly 30 seconds to main engine cutoff

50

00:03:31,670 --> 00:03:25,110

velocity is 10 000 feet per second

51
00:03:31,680 --> 00:03:35,910
altitude three hundred thousand feet

52
00:03:43,750 --> 00:03:40,390
a tvc skew for mika was initiated

53
00:03:48,390 --> 00:03:46,470
engines remain nominal

54
00:03:49,830 --> 00:03:48,400
and we have main engine cutoff pss

55
00:03:53,830 --> 00:03:49,840
disable

56
00:03:56,710 --> 00:03:54,869
here and there that everything is

57
00:03:58,390 --> 00:03:56,720
continuing as planned the main engines

58
00:04:00,309 --> 00:03:58,400
cut off right on time and the first

59
00:04:02,070 --> 00:04:00,319
stage separated from the rest of the

60
00:04:04,070 --> 00:04:02,080
antares rocket

61
00:04:05,910 --> 00:04:04,080
coming up next at the four minute and

62
00:04:08,070 --> 00:04:05,920
nine second mark will have fairing

63
00:04:09,670 --> 00:04:08,080

separation the fairing protects sickness

64

00:04:10,949 --> 00:04:09,680

through the early part of launch as it's

65

00:04:13,270 --> 00:04:10,959

flying through the denser part of the

66

00:04:15,350 --> 00:04:13,280

earth's atmosphere and again i'll be at

67

00:04:17,270 --> 00:04:15,360

nine minutes and uh for excuse me four

68

00:04:23,430 --> 00:04:17,280

minutes and nine seconds stage one delta

69

00:04:28,150 --> 00:04:25,590

at this point we're in uh

70

00:04:29,749 --> 00:04:28,160

and we have fairing separation

71

00:04:31,909 --> 00:04:29,759

and there you see an animation of the

72

00:04:34,550 --> 00:04:31,919

fairing separating and hear that

73

00:04:35,909 --> 00:04:34,560

that happened just as planned after that

74

00:04:38,629 --> 00:04:35,919

the

75

00:04:39,670 --> 00:04:38,639

pvc batteries initiated and stage two

76
00:04:42,070 --> 00:04:39,680
ignition

77
00:04:43,990 --> 00:04:42,080
there it is stage two of ignites and

78
00:04:46,310 --> 00:04:44,000
that will be will be burning for two

79
00:04:49,110 --> 00:04:46,320
minutes and forty seconds to continue

80
00:04:52,070 --> 00:04:49,120
antares and sicknesses climb into orbit

81
00:04:54,830 --> 00:04:52,080
the casper 30xl will burn for about two

82
00:05:03,430 --> 00:04:58,550
minutes uh capture 30 xl tvc performance

83
00:05:03,440 --> 00:05:11,430
vehicle power systems remain nominal

84
00:05:15,990 --> 00:05:13,510
attitude's nominal

85
00:05:17,990 --> 00:05:16,000
not much not seeing uh much consumption

86
00:05:19,749 --> 00:05:18,000
from the attitude control now five

87
00:05:22,390 --> 00:05:19,759
minutes into today's flight everything

88
00:05:27,430 --> 00:05:22,400

continuing to go smoothly you can see uh

89

00:05:33,830 --> 00:05:30,790

take cygnus and its 5100 pounds of cargo

90

00:05:38,230 --> 00:05:33,840

on its way to the space station

91

00:05:38,240 --> 00:05:46,230

our systems remain good

92

00:05:51,189 --> 00:05:48,870

alpha 2 is 190 kilometers

93

00:05:53,270 --> 00:05:51,199

we're about 90 seconds from stage two

94

00:05:56,629 --> 00:05:53,280

burnout minute and a half left for stage

95

00:05:59,189 --> 00:05:56,639

two to continue firing then it will

96

00:06:01,590 --> 00:05:59,199

burn out once uh cygnus and antares

97

00:06:04,070 --> 00:06:01,600

reach orbit

98

00:06:05,830 --> 00:06:04,080

just continuing stage two burn here

99

00:06:13,189 --> 00:06:05,840

vehicle attitude looks nominal all

100

00:06:13,199 --> 00:06:17,110

vehicle attitude is nominal

101
00:06:17,120 --> 00:06:20,790
power looks good

102
00:06:24,230 --> 00:06:22,390
just one minute left for stage two to

103
00:06:27,029 --> 00:06:24,240
continue burning attitude remains

104
00:06:27,039 --> 00:06:37,510
altitude is 210 kilometers

105
00:06:37,520 --> 00:06:43,029
attitude remains nominal

106
00:06:43,039 --> 00:06:46,230
power is nominal

107
00:06:50,950 --> 00:06:48,790
should be coming up on motor tail off

108
00:06:56,390 --> 00:06:50,960
right now we see the start of the motor

109
00:06:56,400 --> 00:07:00,469
attitude remains nominal

110
00:07:00,479 --> 00:07:06,870
altitude is 220 kilometers

111
00:07:13,270 --> 00:07:08,950
motor pressure continues to tail off as

112
00:07:20,150 --> 00:07:17,350
and we have stage two burnout

113
00:07:22,550 --> 00:07:20,160

and teres is in orbit

114

00:07:24,790 --> 00:07:22,560

and terry's in cygnus safely in orbit

115

00:07:27,270 --> 00:07:24,800

now and stage two having finished it's

116

00:07:29,350 --> 00:07:27,280

part of the climb into space got a

117

00:07:31,270 --> 00:07:29,360

couple more minutes now before

118

00:07:33,350 --> 00:07:31,280

the next milestone which is when the

119

00:07:34,710 --> 00:07:33,360

cygnus cargo craft will separate from

120

00:07:36,710 --> 00:07:34,720

interiors and let

121

00:07:38,710 --> 00:07:36,720

the rocket fall away

122

00:07:41,749 --> 00:07:38,720

that'll be taking place at nine minutes

123

00:07:43,189 --> 00:07:41,759

and four seconds into launch so

124

00:07:45,189 --> 00:07:43,199

just a little over a minute and a half

125

00:07:52,790 --> 00:07:45,199

left for that our systems still look

126

00:07:52,800 --> 00:08:05,990

vehicle attitude is nominal

127

00:08:09,510 --> 00:08:07,749

vehicle power systems and attitude

128

00:08:10,790 --> 00:08:09,520

remain nominal at this point again we're

129

00:08:17,189 --> 00:08:10,800

just uh

130

00:08:20,150 --> 00:08:18,550

attitude and power remaining eight

131

00:08:21,510 --> 00:08:20,160

minutes now into today's launch and

132

00:08:23,029 --> 00:08:21,520

again as you're hearing everything

133

00:08:24,790 --> 00:08:23,039

continuing to look good we're waiting

134

00:08:26,550 --> 00:08:24,800

for the separation of this thing this

135

00:08:29,270 --> 00:08:26,560

cargo craft which will take place at the

136

00:08:31,670 --> 00:08:29,280

nine minute and four seconds

137

00:08:33,190 --> 00:08:31,680

of nitrogen from the

138

00:08:35,509 --> 00:08:33,200

second stage attitude control system

139

00:08:37,350 --> 00:08:35,519

cygnus is carrying with it 5100 pounds

140

00:08:38,630 --> 00:08:37,360

of cargo including

141

00:08:40,790 --> 00:08:38,640

more than a thousand pounds of

142

00:08:43,670 --> 00:08:40,800

scientific equipment and

143

00:08:45,509 --> 00:08:43,680

samples that will be used in the many

144

00:08:46,949 --> 00:08:45,519

science experiments that go on onboard

145

00:08:52,470 --> 00:08:46,959

the international space station at any

146

00:08:52,480 --> 00:09:10,070

attitude and power are nominal

147

00:09:18,790 --> 00:09:14,150

awaiting payload separation shortly here

148

00:09:24,230 --> 00:09:21,030

attitude is nominal

149

00:09:26,070 --> 00:09:24,240

and we have cygnus spacecraft separation

150

00:09:27,990 --> 00:09:26,080

and you see an animation of by the

151

00:09:29,910 --> 00:09:28,000

antares pulling away from the cygnus

152

00:09:30,949 --> 00:09:29,920

cargo craft which will continue it on

153

00:09:32,710 --> 00:09:30,959

its own

154

00:09:34,710 --> 00:09:32,720

uh to make a several day journey to the

155

00:09:37,269 --> 00:09:34,720

international space station scheduled to

156

00:09:42,710 --> 00:09:37,279

arrive

157

00:09:46,070 --> 00:09:44,470

good injection of sickness into the

158

00:09:49,190 --> 00:09:46,080

intended orbit with that we're going to

159

00:09:50,949 --> 00:09:49,200

sign off from the rcc and wish cygnus