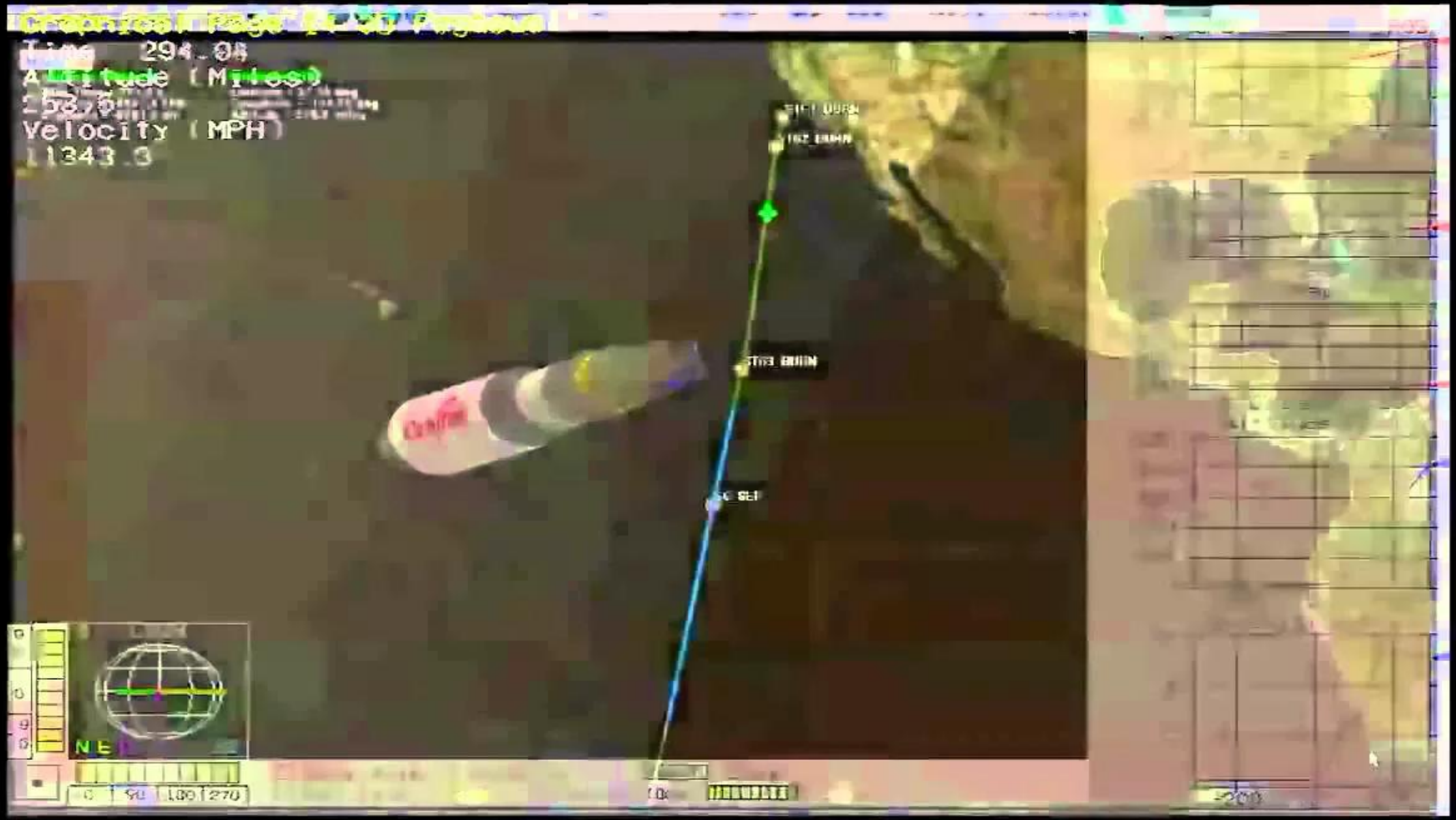
Time 294.08
Velocity (MPH)
1343.3
NE

1
00:00:49,310 --> 00:01:12,210
meaning

2
00:01:12,220 --> 00:01:21,510
you

3
00:01:26,190 --> 00:01:24,300
and masti mlc on countdown one we've now

4
00:02:05,820 --> 00:01:26,200
complete our pre tech pre takeoff

5
00:02:05,830 --> 00:02:10,480
you

6
00:02:10,490 --> 00:02:20,470
now

7
00:02:26,569 --> 00:02:23,600
Elsie pegas go for launch l see it go

8
00:02:31,490 --> 00:02:26,579
for launch PLT confirm that's rough

9
00:02:43,970 --> 00:02:31,500
stand by for deployment TLT drop on my

10
00:02:50,270 --> 00:02:43,980
mark 321 drop this is away and ignition

11
00:02:52,220 --> 00:02:50,280
of the Pegasus rocket attitude remains

12
00:02:58,369 --> 00:02:52,230
nominal power buses remain strong with

13
00:03:02,839 --> 00:02:58,379

good voltage on all buses this Pegasus

14
00:03:04,399 --> 00:03:02,849
is underway properly fins are following

15
00:03:12,470 --> 00:03:04,409
commands and controlling the flight of

16
00:03:14,569 --> 00:03:12,480
the vehicle attitude Ermine's nominal 35

17
00:03:20,960 --> 00:03:14,579
seconds into the iris mission we're past

18
00:03:23,149 --> 00:03:20,970
max Q vehicle power buses remain nominal

19
00:03:24,740 --> 00:03:23,159
vehicle is flying along the nominal

20
00:03:30,319 --> 00:03:24,750
predicted track indicating good

21
00:03:32,449 --> 00:03:30,329
performance at two demands nominal over

22
00:03:34,809 --> 00:03:32,459
50 seconds into the flight we're now

23
00:03:37,550 --> 00:03:34,819
over a hundred thousand feet in altitude

24
00:03:43,339 --> 00:03:37,560
traveling over 3000 correction four

25
00:03:45,920 --> 00:03:43,349
thousand miles an hour power buses

26
00:03:47,629 --> 00:03:45,930
remain strong approximately 10 seconds

27
00:03:51,939 --> 00:03:47,639
to stage one burnout in the stage one

28
00:03:54,439 --> 00:03:51,949
burn Stage one is burned out

29
00:04:01,930 --> 00:03:54,449
approximately 15 seconds to Stage one

30
00:04:12,740 --> 00:04:08,210
attitude remains nominal our bus is

31
00:04:15,559 --> 00:04:12,750
nominal stage one step in a stage

32
00:04:21,520 --> 00:04:15,569
separation stage 2 admission is

33
00:04:26,170 --> 00:04:23,260
our buses remain strong good voltage on

34
00:04:28,060 --> 00:04:26,180
all buses attitude remains nominal

35
00:04:30,790 --> 00:04:28,070
vehicle continues to fly along the

36
00:04:32,980 --> 00:04:30,800
nominal predicted track and at this

37
00:04:34,990 --> 00:04:32,990
point we lose our tracking of the chase

38
00:04:38,140 --> 00:04:35,000

plane with the chase plane of the

39
00:04:40,750 --> 00:04:38,150
Pegasus will be looking forward with

40
00:04:42,310 --> 00:04:40,760
ground cameras if HTTP VC is operating

41
00:04:43,780 --> 00:04:42,320
nominally the nozzle is following

42
00:04:51,850 --> 00:04:43,790
commands and controlling the flight of

43
00:04:56,130 --> 00:04:51,860
the vehicle fairing separation confirmed

44
00:05:04,920 --> 00:04:58,420
attitude remains nominal after the

45
00:05:07,390 --> 00:05:04,930
deployment of the fairing approaching

46
00:05:09,940 --> 00:05:07,400
150 seconds into the iris mission all

47
00:05:12,100 --> 00:05:09,950
systems are performing nominally vehicle

48
00:05:17,670 --> 00:05:12,110
velocity is now eleven thousand miles an

49
00:05:25,150 --> 00:05:22,060
attitude remains nominal stage two is

50
00:05:27,550 --> 00:05:25,160
burned out vehicle is now in a prolonged

51
00:05:33,190 --> 00:05:27,560
Coast phase as we Coast up to the

52
00:05:36,790 --> 00:05:33,200
insertion altitude all systems are

53
00:05:40,770 --> 00:05:36,800
operating nominally now 180 seconds or

54
00:05:44,920 --> 00:05:43,270
telemetry is being broadcast from the

55
00:05:48,279 --> 00:05:44,930
stage three antennas and we have solid

56
00:05:49,930 --> 00:05:48,289
lock on telemetry in the center stage to

57
00:05:54,610 --> 00:05:49,940
predicted burnout point matches very

58
00:05:56,200 --> 00:05:54,620
nicely with the nominal prediction the

59
00:05:58,150 --> 00:05:56,210
flight computer on board the Pegasus

60
00:06:00,400 --> 00:05:58,160
vehicle has calculated the stage three

61
00:06:04,600 --> 00:06:00,410
ignition time switch the ignition time

62
00:06:11,770 --> 00:06:04,610
is 538 seconds and that is right on the

63
00:06:13,330 --> 00:06:11,780

nominal value so the coast phase if the

64
00:06:16,060 --> 00:06:13,340
vehicle is in will last approximately

65
00:06:18,430 --> 00:06:16,070
five more minutes as we Coast up to an

66
00:06:25,810 --> 00:06:18,440
insertion altitude of approximately 328

67
00:06:37,010 --> 00:06:25,820
miles our buses remain strong telemetry

68
00:06:43,189 --> 00:06:40,490
now approximately 240 minutes into the

69
00:06:46,430 --> 00:06:43,199
mission the altitude is over 200 miles

70
00:06:48,529 --> 00:06:46,440
vehicle velocity is eleven thousand six

71
00:06:57,980 --> 00:06:48,539
hundred miles an hour all systems are

72
00:07:01,790 --> 00:06:57,990
operating nominally the nominal orbit

73
00:07:07,879 --> 00:07:01,800
for the iris spacecraft will be 380 7.5

74
00:07:09,830 --> 00:07:07,889
x 418 point seven miles all systems

75
00:07:12,200 --> 00:07:09,840
continue to operate nominally during the

76
00:07:22,070 --> 00:07:12,210
coast phase as the vehicle approaches

77
00:07:28,159 --> 00:07:22,080
the insertion altitude iris will orbit

78
00:07:30,740 --> 00:07:28,169
the earth every 97 minutes approaching

79
00:07:32,959 --> 00:07:30,750
300 seconds into the iris mission all

80
00:07:35,779 --> 00:07:32,969
systems are operating nominally the

81
00:08:08,960 --> 00:07:35,789
vehicle is over 250 miles in altitude at

82
00:08:13,860 --> 00:08:11,640
attitude remains nominal all power buses

83
00:08:28,990 --> 00:08:13,870
remain strong good voltage and expected

84
00:08:33,909 --> 00:08:31,390
we are approximately six minutes into

85
00:08:36,490 --> 00:08:33,919
the Pegasus iris mission all systems are

86
00:08:38,740 --> 00:08:36,500
operating nominally again the vehicle is

87
00:08:42,580 --> 00:08:38,750
still in the coast phase stage three

88
00:08:44,740 --> 00:08:42,590

ignition is expected at 538 seconds and

89
00:09:01,590 --> 00:08:44,750
we are now at three hundred and sixty

90
00:09:06,540 --> 00:09:03,960
our buses remain nominal during this

91
00:09:12,620 --> 00:09:06,550
Coast phase the vehicle RCS system is

92
00:09:18,480 --> 00:09:15,569
now at four hundred seconds into the

93
00:09:27,269 --> 00:09:18,490
mission vehicles at an altitude of 329

94
00:09:30,650 --> 00:09:27,279
miles velocity is 1800 miles an hour our

95
00:09:50,530 --> 00:09:30,660
actual launch time was seven 2730

96
00:09:55,420 --> 00:09:52,930
on the countdown that we're now at 435

97
00:09:57,640 --> 00:09:55,430
seconds into the Pegasus iris mission

98
00:09:59,650 --> 00:09:57,650
all systems continue to perform

99
00:10:04,870 --> 00:09:59,660
nominally a little less than 100 seconds

100
00:10:07,210 --> 00:10:04,880
away from stage three ignition that's

101
00:10:09,400 --> 00:10:07,220
the voice of Steve Hollow the flight

102
00:10:11,260 --> 00:10:09,410
systems engineer approximately seconds

103
00:10:13,030 --> 00:10:11,270
the RCS system will be used to reorient

104
00:10:23,110 --> 00:10:13,040
the vehicle in preparation for stage 3

105
00:10:29,170 --> 00:10:23,120
ignition add a tutor mains nominal power

106
00:10:31,630 --> 00:10:29,180
buses remain strong vehicle is now

107
00:10:34,180 --> 00:10:31,640
maneuvering into the stage 3 ignition

108
00:10:36,550 --> 00:10:34,190
attitude RCS is performing nominally

109
00:10:46,700 --> 00:10:36,560
vehicle attitude remains nominal during

110
00:10:54,050 --> 00:10:52,280
stage 3 ignition and 30 seconds our

111
00:10:56,510 --> 00:10:54,060
buses remains strong vehicle

112
00:10:58,190 --> 00:10:56,520
reorientation maneuver is complete here

113
00:11:07,130 --> 00:10:58,200

now with the appropriate stage 3

114
00:11:08,780 --> 00:11:07,140
ignition attitude approximately 20

115
00:11:10,850 --> 00:11:08,790
seconds will have stage to separation

116
00:11:25,420 --> 00:11:10,860
followed about 11 seconds later by stage

117
00:11:38,390 --> 00:11:30,680
stage to separation five seconds to

118
00:11:41,080 --> 00:11:38,400
stage three ignition stage three

119
00:11:43,520 --> 00:11:41,090
ignition attitude remains nominal

120
00:11:54,889 --> 00:11:43,530
telemetry beginning to take hits we are

121
00:11:59,569 --> 00:11:57,259
and this is peg on the countdown that we

122
00:12:01,249 --> 00:11:59,579
have LRS in the center all indications

123
00:12:04,160 --> 00:12:01,259
are that the vehicle is operating

124
00:12:09,079 --> 00:12:04,170
nominally when we went over the horizon

125
00:12:17,859 --> 00:12:09,089
for radio so stand by for iOS hopefully

126
00:12:21,319 --> 00:12:17,869
by airborne asset its loss of the

127
00:12:29,389 --> 00:12:21,329
tracking signal to Vandenberg stay by

128
00:12:31,309 --> 00:12:29,399
now for Dryden's dc-8 to acquire and we

129
00:12:33,230 --> 00:12:31,319
have a OS in the center we have good

130
00:12:35,389 --> 00:12:33,240
telemetry all systems appear to be

131
00:12:40,040 --> 00:12:35,399
continuing to operate nominally we're

132
00:12:45,889 --> 00:12:40,050
still in the stage through burn attitude

133
00:12:49,879 --> 00:12:45,899
remains nominal and we have stage 3

134
00:12:52,160 --> 00:12:49,889
burnout the vehicle is in orbit and we

135
00:12:54,230 --> 00:12:52,170
are at a nominal target orbit for the

136
00:12:56,749 --> 00:12:54,240
iris mission we're now going to enter a

137
00:12:58,579 --> 00:12:56,759
coast phase where we reorient the

138
00:13:01,069 --> 00:12:58,589

vehicle and preparation for payload

139
00:13:03,769 --> 00:13:01,079
separation that will last approximately

140
00:13:08,239 --> 00:13:03,779
two minutes and 30 seconds from this

141
00:13:10,639 --> 00:13:08,249
point forward attitude remains nominal

142
00:13:13,129 --> 00:13:10,649
the vehicle RCS is being used to control

143
00:13:15,019 --> 00:13:13,139
the vehicle attitude and is now pointed

144
00:13:23,629 --> 00:13:15,029
in the appropriate direction for iris

145
00:13:25,759 --> 00:13:23,639
payload separation our buses remain

146
00:13:28,970 --> 00:13:25,769
strong good voltage and good curl on all

147
00:13:33,290 --> 00:13:28,980
buses yes Deon haven't go ahead how we

148
00:13:35,569 --> 00:13:33,300
do attitude remains nominal where 650

149
00:13:43,730 --> 00:13:35,579
seconds into the mission expect a load

150
00:13:45,769 --> 00:13:43,740
separation at 786 seconds copy that and

151
00:13:54,300 --> 00:13:45,779
GNC reports that we have an excellent on

152
00:13:58,500 --> 00:13:56,250
this peg in the center we are

153
00:14:09,320 --> 00:13:58,510
experiencing some loss of telemetry

154
00:14:12,000 --> 00:14:09,330
which is just due to link margin and

155
00:14:29,840 --> 00:14:12,010
this is pegging the center we have elbow

156
00:14:35,680 --> 00:14:32,449
and this is peg on the count on that we

157
00:14:37,999 --> 00:14:35,690
do have lrs by local vandeberg sites

158
00:14:41,420 --> 00:14:38,009
unfortunately we do not have the

159
00:14:43,490 --> 00:14:41,430
airborne asset collecting telemetry so

160
00:14:45,050 --> 00:14:43,500
that is the reason that we hire LS it is

161
00:14:57,620 --> 00:14:45,060
not associated with the performance of

162
00:14:59,180 --> 00:14:57,630
the Pegasus launch vehicle this is peg

163
00:15:01,129 --> 00:14:59,190

on the countdown that we still have el

164
00:15:03,019 --> 00:15:01,139
oso reason for that is that the airborne

165
00:15:05,900 --> 00:15:03,029
aircraft that was sent up to receive

166
00:15:07,280 --> 00:15:05,910
telemetry downrange did not pick up a

167
00:15:09,590 --> 00:15:07,290
signal that has not been able to track

168
00:15:10,670 --> 00:15:09,600
the signal that was not a problem

169
00:15:13,639 --> 00:15:10,680
associated with the Pegasus launch

170
00:15:15,350 --> 00:15:13,649
vehicle as we saw the local range

171
00:15:27,190 --> 00:15:15,360
telemetry was strong until we went over

172
00:15:27,200 --> 00:15:33,180
payload sep would occur in 12 seconds

173
00:15:48,010 --> 00:15:39,120
and just for note the UTC of drop was 02

174
00:15:49,510 --> 00:15:48,020
2746 UTC of drop was 02 2746 predicted

175
00:15:50,980 --> 00:15:49,520
payload separation and this is just

176
00:15:54,250 --> 00:15:50,990
based on the timer running here in the

177
00:15:56,110 --> 00:15:54,260
center is now we do not have telemetry

178
00:15:58,000 --> 00:15:56,120
to confirm that however we do have

179
00:16:00,250 --> 00:15:58,010
enough data to provide the spacecraft

180
00:16:08,710 --> 00:16:00,260
with a state vector so that is in work

181
00:16:10,900 --> 00:16:08,720
at this time this is peg on countdown

182
00:16:13,960 --> 00:16:10,910
we'll go ahead and report the orbit that

183
00:16:17,350 --> 00:16:13,970
we had at the loss of telemetry we add

184
00:16:19,510 --> 00:16:17,360
an apogee of six hundred and sixty nine

185
00:16:23,460 --> 00:16:19,520
point nine eight kilometers which is

186
00:16:26,770 --> 00:16:23,470
right on target at a perigee of 622 dot

187
00:16:32,560 --> 00:16:26,780
96 again which is right on target an

188
00:16:37,720 --> 00:16:32,570

inclination of 97 dot 899 again on

189
00:16:39,490 --> 00:16:37,730
target and an ml tan of 0 60 235 again

190
00:16:42,190 --> 00:16:39,500
right on target so a great great

191
00:16:49,000 --> 00:16:42,200
insertion orbit for iris state vector is

192
00:16:55,660 --> 00:16:49,010
in work an update to our launch time 620

193
00:16:58,210 --> 00:16:55,670
or other 727 44 decimal 0007 2744

194
00:17:00,820 --> 00:16:58,220
decimal zero zero zero and that we have

195
00:17:03,370 --> 00:17:00,830
a report that iris is being tracked by

196
00:17:05,740 --> 00:17:03,380
the teachers relay satellites those

197
00:17:07,270 --> 00:17:05,750
satellites are reading telemetry from

198
00:17:09,760 --> 00:17:07,280
the spacecraft which is obviously

199
00:17:11,680 --> 00:17:09,770
separated successfully from Pegasus to

200
00:17:14,230 --> 00:17:11,690
their ground stations so congratulations