1
00:00:03,610 --> 00:00:10,610
CAPCOM Tranquility Base, Houston.

2
00:00:12,469 --> 00:00:19,469
TRANQUILITY Roger. Go ahead.

3
00:00:21,340 --> 00:00:28,340
CAPCOM Roger. Our guidance recommendation is PGNCS and you're cleared for takeoff.

4
00:00:47,950 --> 00:00:54,950
TRANQUILITY Roger, understand. We're number one on the runway.

5
00:01:42,640 --> 00:01:42,950
CAPCOM Roger.

6
00:01:42,950 --> 00:01:43,130
ARMSTRONG Bait scale 25.

7
00:01:43,130 --> 00:01:43,220
ALDRIN 25.

8
00:01:43,220 --> 00:01:43,590
ARMSTRONG Ascent translation 4 jets. Balance couple on.

9
00:01:43,590 --> 00:01:43,770
ALDRIN Balance couple on.

10
00:01:43,770 --> 00:01:44,220
ARMSTRONG BTCHS, balance push button reset, board to stage reset.

11
00:01:44,220 --> 00:01:44,310
ALDRIN Reset.

12
00:01:44,310 --> 00:01:44,860

ARMSTRONG Headband minimum, bat control to mode control, earth control auto, both

13
00:01:44,860 --> 00:01:44,990
ALDRIN Auto, auto.

14
00:01:44,990 --> 00:01:45,400
PA0 Crew of Eagle going through their preadmission checklist.

15
00:01:45,400 --> 00:01:52,400
ARMSTRONG The team is standing by for 2 minutes to - for the guidance steering in the AGS.

16
00:02:18,640 --> 00:02:25,640
CAPCOM Eagle, Houston, you're locking good to us ·

17
00:02:36,129 --> 00:02:40,500
TRANQUILITY Roger.

18
00:02:40,500 --> 00:02:47,500
TRANQUILITY …9, 8, 7, 6, 5, abort stage, engine arm ascent, proceed, That was beautiful.

19
00:03:06,879 --> 00:03:07,560
26, 36 feet per second up. Be advised for the pitch over. Very smooth. Aldrin's (garbled)

20
00:03:07,560 --> 00:03:08,030
logged. Very quiet ride. There's that one crater down there.

21
00:03:08,030 --> 00:03:08,180
PAO 1000 feet high, 80 feet per second vertical rise.

22
00:03:08,180 --> 00:03:08,310
CAPCOM Eagle, Houston. Request manual start over ride.

23
00:03:08,310 --> 00:03:08,340
EAGLE Roger.

24
00:03:08,340 --> 00:03:08,400
PAO 2600 feet altitude.

25
00:03:08,400 --> 00:03:08,430
EAGLE (Garbled)

26
00:03:08,430 --> 00:03:08,569
CAPCOM Eagle, Houston, 1 minute and you're looking good.

27
00:03:08,569 --> 00:03:15,569
CAPCOM Columbia, Houston. We need the sec arm circuit breakers CLOSED.

28
00:03:17,140 --> 00:03:24,140
COLUMBIA Okay. Going in touch time Bat A and Bat B.

29
00:03:35,610 --> 00:03:41,610
CAPCOM Columbia, Houston. Logic looks good. You can arm your PYROs at your convenience.

30
00:03:41,610 --> 00:03:46,920
COLUMBIA Thank you.

31
00:03:46,920 --> 00:03:53,920
COLUMBIA Eagle, you can find your start to maneuver to CSI.

32
00:04:06,370 --> 00:04:09,909
EAGLE Okay.

33
00:04:09,909 --> 00:04:16,909
PAO This is Apollo Control about 6 and 1/2 minutes to ignition on the thermal phase maneuver

34
00:04:21,400 --> 00:04:28,279
in which the crew of Eagle will thrust along
the line of sight toward Columbia. Distance

35
00:04:28,279 --> 00:04:35,279
now between the two spacecraft some 38.6 nautical
miles closing at a rate of 110 feet per second.

36
00:04:37,449 --> 00:04:41,629
CAPCOM All your selections looks good to us.
Out.

37
00:04:41,629 --> 00:04:47,729
EAGLE And, Mike, if you want our target Delta-v,
I'll give it to you.

38
00:04:47,729 --> 00:04:53,419
COLUMBIA Ready to copy.

39
00:04:53,419 --> 00:05:00,419
EAGLE 127 03 3082 +20 2.7 +1.7 -10.6, over.

40
00:05:06,219 --> 00:05:13,219
COLUMBIA 127 03 3082 +20 2.7 +1.7 -10.6, thank
you.

41
00:05:20,439 --> 00:05:27,439
EAGLE I'm showing a good bit of out of plane
velocity on my cross pointers. Mike.

42
00:05:38,969 --> 00:05:45,969
COLUMBIA Rog, I have no indication of it.

43
00:05:57,449 --> 00:06:04,449
COLUMBIA Coming up on 1 minute to TIG, Neil,
how's it looking?

44
00:06:14,619 --> 00:06:17,249

EAGLE Pretty good.

45
00:06:17,249 --> 00:06:19,009
COLUMBIA Good.

46
00:06:19,009 --> 00:06:22,520
EAGLE COLUMBIA Burn complete.

47
00:06:22,520 --> 00:06:26,029
EAGLE Read, burn complete.

48
00:06:26,029 --> 00:06:29,550
COLUMBIA Roger, thank you.

49
00:06:29,550 --> 00:06:36,550
CAPCOM Eagle, Houston, AFT OMNO, low bit rate
and we'll see you at 1 27 +51.

50
00:07:50,979 --> 00:07:57,979
EAGLE I'm not going to do a thing, Mike. I'm
just letting her hold in attitude hold.

51
00:08:15,149 --> 00:08:18,199
COLUMBIA Okay.

52
00:08:18,199 --> 00:08:21,249
EAGLE (Garbled)

53
00:08:21,249 --> 00:08:24,289
COLUMBIA Okay.

54
00:08:24,289 --> 00:08:31,289
COLUMBIA I'm pumping up cabin pressures.

55
00:08:33,440 --> 00:08:40,440
COLUMBIA That was a funny one. You know, I
didn't feel it strike and I thought things

56

00:08:47,379 --> 00:08:54,379
were pretty steady. I went to retract there,
and that's when all hell broke loose. For

57
00:08:57,589 --> 00:09:03,190
you guys, did it appear to you to be that
you were jerking around quite a bit during

58
00:09:03,190 --> 00:09:05,490
the retrack cycle?

59
00:09:05,490 --> 00:09:12,490
EAGLE Yah. It seemed to happen at the time
I put the contact thrust to it, and apparently

60
00:09:30,940 --> 00:09:37,940
it wasn't centered because somehow or other
I accidentally got off in attitude and then

61
00:09:47,449 --> 00:09:54,050
the attitude hold system started firing.

62
00:09:54,050 --> 00:10:01,050
COLUMBIA Yah, I was sure busy there for a
couple of seconds. Are you hearing me alright?

63
00:10:06,050 --> 00:10:11,310
I've got a horrible squeal.

64
00:10:11,310 --> 00:10:18,310
EAGLE Yes, I agree with that, but we hear
you okay.

65
00:10:23,500 --> 00:10:28,629
COLUMBIA Houston, Apollo 11. Over.

66
00:10:28,629 --> 00:10:33,759
CAPCOM Apollo 11, Houston. Go.

67

00:10:33,759 --> 00:10:40,759
COLUMBIA Roger. I'm supposed to adjust the oxygen flow in this thing at six tenths of

68
00:10:50,170 --> 00:10:50,790
a pound per hour, but being as how this transducer is not working right, could you give me an

69
00:10:50,790 --> 00:10:50,810
updated number?

70
00:10:50,810 --> 00:10:51,009
CAPCOM Affirmative. You want to go ahead and adjust your 02 flow until it just goes off

71
00:10:51,009 --> 00:10:51,600
the peg, and then crank the direct 02 valve back down about 5 degrees. Over.

72
00:10:51,600 --> 00:10:51,958
any finer.

73
00:10:51,959 --> 00:10:54,019
a bit – correction - didn't leak a bit this time. Over.

74
00:10:54,019 --> 00:10:54,920
SC Roger, looked good here. Cabin pressure was hanging in there around 100 the latter

75
00:10:54,920 --> 00:11:01,920
part of the burn. It started oscillating a little bit and got down a little bit below

76
00:11:12,230 --> 00:11:14,439
100.

77
00:11:14,439 --> 00:11:18,850
CAPCOM Roger.

78
00:11:18,850 --> 00:11:25,850
SC 96 or so.

79
00:11:27,680 --> 00:11:32,089
CAPCOM Roger.

80
00:11:32,089 --> 00:11:38,889
PAO Most of the conversations so far has been
from Neil Armstrong and Mike Collins. That

81
00:11:38,889 --> 00:11:45,889
last comment came from Collins. Our first
report after acquisition was from Neil Armstrong.

82
00:12:02,170 --> 00:12:06,870
That trans-earth injection burn was very close
to nominal. At this time we show the spacecraft

83
00:12:06,870 --> 00:12:13,870
traveling at a speed of 7,603 feet per second.
The velocity already beginning to drop off

84
00:12:14,170 --> 00:12:21,170
and we're at an altitude of 445 nautical miles
now from the moon. This is Apollo Control.

85
00:12:22,970 --> 00:12:28,319
We now show the spacecraft traveling at 7,378
feet per second.

86
00:12:28,319 --> 00:12:35,319
Altitude 568 nautical miles. The next order
of business will Director, Gene Kranz, requested

87
00:12:44,079 --> 00:12:51,079
his flight controllers, prior to acquisition
of signal to review their procedures and to

88
00:12:51,819 --> 00:12:58,819

take as many steps as possible to get the
crew to sleep as soon as possible. There will

89
00:12:59,930 --> 00:13:06,930
be a press conference in the Building 1 auditorium
and we estimate the time on that at about

90
00:13:08,949 --> 00:13:15,949
12:30 Central Daylight Time. And our LM telecommunications
engineer reports that we've just had acquisition

91
00:13:17,009 --> 00:13:24,009
of signal from Eagle which is still in lunar
orbit. The last fix that we had on Eagle's

92
00:13:26,199 --> 00:13:33,199
orbit showed an apogee of 64. 1 and a para,
apocynthion rather of 64. 1 and a paracynthion

93
00:13:34,060 --> 00:13:41,060
of 64.4 nautical miles. The spacecraft altitude
is now climbed to almost 700 nautical miles

94
00:13:50,639 --> 00:13:57,639
from the moon. We show a weight of 26,510
pounds, about 10,000 pounds less than what

95
00:14:00,120 --> 00:14:07,120
we had actually about 1100 or 11,000 pounds
– let’s correct that - about 10,100 pounds

96
00:14:11,529 --> 00:14:15,499
less than what we had prior to the transearth
injection burn.

97
00:14:15,499 --> 00:14:22,499
CAPCOM Apollo 11, Houston. Would you give
us PU and accept. We've got a REFSMMAT for

98
00:14:33,839 --> 00:14:36,240

you/ Over.

99
00:14:36,240 --> 00:14:38,639
SC Okay.

100
00:14:38,639 --> 00:14:45,639
CAPCOM Thank you.

101
00:14:50,120 --> 00:14:57,120
CAPCOM Hello Apollo 11, Houston. We've got
the load in. You can go back to block. Over.

102
00:15:42,749 --> 00:15:43,779
SC Your command module sound seems to be working
out pretty well, Charlie, the amount we carried.

103
00:15:43,779 --> 00:15:46,610
Looks like we carried just about what we needed.

104
00:15:46,610 --> 00:15:47,230
CAPCOM Wonderful.

105
00:15:47,230 --> 00:15:52,579
SC We have one 16 millimeter roll on the ASA
1000 color interior film. We were thinking

106
00:15:52,579 --> 00:15:57,920
of shooting that during entry window number
4 on bracket and try and get the camera guide

107
00:15:57,920 --> 00:16:04,920
sometime in the last couple of days. Give
us all a good time for that.

108
00:16:16,009 --> 00:16:21,069
CAPCOM Roger.

109
00:16:21,069 --> 00:16:28,069
PAO This is Apollo Control. The flight dynamics

officer reports that the burn very nominal,

110
00:16:31,740 --> 00:16:37,869
almost precisely as planned, the burn duration
was about 3 seconds long, but the velocity

111
00:16:37,869 --> 00:16:44,869
change was almost precisely what we had been
expecting. At the present time, Apollo 1t

112
00:16:46,779 --> 00:16:52,129
is 1076 nautical miles from the moon. The
velocity continuing to drop off, down now

113
00:16:52,129 --> 00:16:56,139
to 6698 feet per second.

114
00:16:56,139 --> 00:17:03,139
PAO This is Apollo Control at 136 hours, 44
minutes. Apollo 11 is now 3,720 nautical miles

115
00:17:07,280 --> 00:17:14,280
from the moon and traveling at a speed of
5,367 feet per second. During the press conference

116
00:17:15,199 --> 00:17:22,199
we accumulated about 4 minutes of taped conversation
with the crew. The crew reports at this time

117
00:17:22,490 --> 00:17:27,990
that they are completing taking pictures and
they are getting ready to realign their guidance

118
00:17:27,990 --> 00:17:34,990
system platform. We'll pick up the tape conversation
and then stand by for any following live communications

119
00:17:36,899 --> 00:17:43,899
with the crew. We anticipate that they will
be shortly beginning their pre-sleep checklist

120
00:17:44,000 --> 00:17:48,820
in preparation for a well-deserved rest period.

121
00:17:48,820 --> 00:17:55,820
CAPCOM Hello Apollo 11, Houston. I wondered
if during the TEl burn you utilized the oxidizer

122
00:17:58,230 --> 00:18:00,039
flow valve on the valve on the PUGS? Over.

123
00:18:00,039 --> 00:18:07,039
desiring increase for the whole time since
we started out with it in increase and I saw

124
00:18:25,590 --> 00:18:31,149
that we pretty quickly crossed the line and
started falling about 6 or 7 percent behind.

125
00:18:31,149 --> 00:18:38,149
So I was still expecting it to move up and
then I went down to full

126
00:18:38,159 --> 00:18:41,490
decrease and brought it back down to a difference
of 2 percent. Over.

127
00:18:41,490 --> 00:18:48,490
CAPCOM Roger. Thank you very much, Buzz.

128
00:18:50,460 --> 00:18:57,460
SC 2 tenths of a percent, I'm sorry.

129
00:19:00,600 --> 00:19:06,350
CAPCOM Right. Thank you. Apollo 11, Houston.
You can go to PTC attitude and torque at your,

130
00:19:06,350 --> 00:19:07,690
and do the P52 and torque at your convenience.

Over.

131
00:19:07,690 --> 00:19:09,830
SC Hey, we got to take some more pictures,
Charlie. Is there any constraint normally

132
00:19:09,830 --> 00:19:15,539
in staying here for a while?

133
00:19:15,539 --> 00:19:17,580
CAPCOM No sir.

134
00:19:17,580 --> 00:19:19,240
SC Thank you.

135
00:19:19,240 --> 00:19:24,179
CAPCOM Go ahead 11. Over.

136
00:19:24,179 --> 00:19:31,179
SC How does that tracking look or is it too
early to tell?

137
00:19:37,029 --> 00:19:44,029
CAPCOM Stand by, Mike.
CAPCOM FIDO's are looking at the data. It's

138
00:19:47,330 --> 00:19:53,480
too early to tell yet exactly. It's looking
real good so far. We'll have you some answers

139
00:19:53,480 --> 00:19:55,340
shortly on trajectory. Over.

140
00:19:55,340 --> 00:19:59,760
SC Yeah. What FIDO is it?

141
00:19:59,760 --> 00:20:01,970
CAPCOM Jay Green.

142
00:20:01,970 --> 00:20:04,179
SC Howdy Jay.

143
00:20:04,179 --> 00:20:10,090
CAPCOM 11, Houston. We have a DAP CSM update
for you.

144
00:20:10,090 --> 00:20:13,019
SC Go ahead.

145
00:20:13,019 --> 00:20:20,019
CAPCOM Rog. That CSM weight, Mike, 26370.
Over.

146
00:20:20,840 --> 00:20:24,740
SC Thank you, sir.

147
00:20:24,740 --> 00:20:31,740
CAPCOM You're welcome. Apollo 11, Houston.
We've taken your onboard vector and propagated

148
00:20:32,919 --> 00:20:37,740
it for you and it's looking real good. We
only got about 24 minutes tracking now and

149
00:20:37,740 --> 00:20:41,140
it’s really too early to tell on the radar.
Over.

150
00:20:41,140 --> 00:20:44,700
SC Roger, I understand.

151
00:20:44,700 --> 00:20:51,100
CAPCOM Hello Apollo 11, Houston. Mike, did
you notice any transients at ignition on TEI?

152
00:20:51,100 --> 00:20:51,130
Over.

153
00:20:51,130 --> 00:20:58,130
SC Yah. The transients are more noticeable
than on previous burn, Charlie. I just wrote

154
00:21:05,320 --> 00:21:11,600
it off on the fact that we had a light command
module but there was considerable roll activity

155
00:21:11,600 --> 00:21:18,600
which dampened down after the first 20 seconds,
I would guess, after the burn but then there

156
00:21:20,380 --> 00:21:26,240
was also some pitch and yaw activity. I don't
believe it was abnormal and seemed to be deadbanding

157
00:21:26,240 --> 00:21:31,640
fatherly crisply in roll plus or minus about
8 degrees inside the center line and after

158
00:21:31,640 --> 00:21:37,720
the first couple of, oh, after the first 20
seconds or so the gimbals were quiet and pitch

159
00:21:37,720 --> 00:21:42,440
and yaw were relatively quiet. Before that
there was some oscillation but mostly just

160
00:21:42,440 --> 00:21:45,140
in rates-total attitude hung in there pretty
well.

161
00:21:45,140 --> 00:21:50,130
CAPCOM Roger. Thank you very much. We were
looking at the playback and we saw some things

162
00:21:50,130 --> 00:21:55,460
that rather stood out. We'll be back with
you later on that.

163
00:21:55,460 --> 00:22:02,049
SC Okay.

164
00:22:02,049 --> 00:22:09,049
CAPCOM Apollo 11, Houston. Have you finished taking pictures? Over.

165
00:22:22,610 --> 00:22:28,750
SC We're just finishing up, Charlie.

166
00:22:28,750 --> 00:22:30,789
CAPCOM Roger.

167
00:22:30,789 --> 00:22:37,789
SC We'll get started on the P52 here pretty soon.

168
00:22:41,029 --> 00:22:43,070
CAPCOM Copy.

169
00:22:43,070 --> 00:22:45,120
SC (Garbled).

170
00:22:45,120 --> 00:22:50,679
PAO This is Apollo Control. That brings us up to date with the taped conversation. We'll

171
00:22:50,679 --> 00:22:55,360
stand by for any further live communication from the crew before they begin their sleep

172
00:22:55,360 --> 00:23:02,360
period. We've gotten some preliminary figures from the Flight Dynamics Officer on that transearth

173
00:23:05,539 --> 00:23:12,539
injection burn after a review of the telemetry data and it shows that our change in velocity

174
00:23:15,559 --> 00:23:22,559
was nominal 3,283.5 feet per second. We also
show a nominal burn time of 2 minutes, 28

175
00:23:26,029 --> 00:23:33,029
seconds. The crew reported the burn time about
2 to 3 seconds long based on their onboard

176
00:23:35,049 --> 00:23:37,100
data. The ground data shows

177
00:23:37,100 --> 00:23:44,100
the burn to have been just about nominal.
Based on the preliminary tracking it would

178
00:23:50,409 --> 00:23:57,409
appear that the splash down would occur almost
precisely as predicted or planned in the flight

179
00:23:57,779 --> 00:24:04,779
plan. That would be at 195 hours 18 minutes
40 seconds ground elapse time. And we would

180
00:24:05,909 --> 00:24:12,909
expect that splash down time to change somewhat
during the transearth coast particularly as

181
00:24:15,559 --> 00:24:22,559
the need or lack of need for midcourse correction
becomes more apparent with additional tracking.

182
00:24:25,340 --> 00:24:32,340
At this time Apollo 11 is 4,086 nautical miles
from the moon traveling at almost precisely

183
00:24:34,840 --> 00:24:41,840
1 mile per second, 5,283 feet per second,
and that's just updated 5,280 feet per second.

184

00:24:44,840 --> 00:24:51,840
CAPCOM Hello Apollo 11, Houston. You can crank up on the PTC at any time. Over.

185
00:24:54,860 --> 00:24:56,480
SC Thank you.

186
00:24:56,480 --> 00:25:00,429
CAPCOM Apollo 11, Houston.

187
00:25:00,429 --> 00:25:05,100
SC Go ahead, Houston.

188
00:25:05,100 --> 00:25:11,850
CAPCOM Rog, 11. This is the regional CAPCOM. Congratulations on an outstanding job. You

189
00:25:11,850 --> 00:25:17,490
guys have really put on a great show up there. I think it's about time you power down and

190
00:25:17,490 --> 00:25:21,889
got a little rest though you've had a mighty long day here. Hope you're all going to get

191
00:25:21,889 --> 00:25:25,860
a good sleep on the way back. I look forward to seeing you when you get back here. Don't

192
00:25:25,860 --> 00:25:29,309
fraternize with any of those bugs in route except for the Hornet.

193
00:25:29,309 --> 00:25:36,309
SC Okay. Thank you boss. We'll, we're looking forward to a little rest and a restful trip

194
00:25:41,000 --> 00:25:43,909
back and see you when we get there·

195
00:25:43,909 --> 00:25:45,690
CAPCOM Right. You've earned it.

196
00:25:45,690 --> 00:25:52,690
PAO That exchange was between Donald K., Deke, Slayton, Director of Flight Crew Operations

197
00:25:53,130 --> 00:25:57,100
at the Manned Spacecraft Center and astronaut Nell Armstrong.

198
00:25:57,100 --> 00:26:03,970
CAPCOM Hello, Apollo 11, Houston. We'd like you to turn off 02 tank number 1 heaters.

199
00:26:03,970 --> 00:26:04,450
Over.

200
00:26:04,450 --> 00:26:06,870
SC It's off. Thank you.

201
00:26:06,870 --> 00:26:07,840
CAPCOM Rog.

202
00:26:07,840 --> 00:26:13,549
CAPCOM Hello, Apollo 11, Houston. For your information, the LGC in Eagle just went sailing

203
00:26:13,549 --> 00:26:16,120
up about 7 hours. Over.

204
00:26:16,120 --> 00:26:23,120
SC Okay. It's very good, then (garbled), death of a real winner there. Charlie, we're going

205
00:26:29,049 --> 00:26:36,049
to rotate about pitch 270 degrees on the way home vice 1 - or 090 on the way out. Right?

206
00:26:51,049 --> 00:26:53,250
CAPCOM Right, sir.

207
00:26:53,250 --> 00:27:00,250
SC Okay, We're reporting in a maneuver to
that attitude is in progress.

208
00:27:03,429 --> 00:27:04,809
CAPCOM Rog.

209
00:27:04,809 --> 00:27:11,809
SC Houston, this status report Radiation CDR
11017, CMP 10019, LMP 09020. No medication.

210
00:27:14,470 --> 00:27:21,470
CAPCOM Say again, please, Neil. You were breaking
up. We missed that. Over.

211
00:27:23,450 --> 00:27:30,450
SC Okay. This is crew status report. Radiation
CDR. 11017, CMP 10019, LMP 09020. No medication.

212
00:27:34,490 --> 00:27:40,440
CAPCOM Roger. Thank you. And we didn't get
any crew status report from you this morning.

213
00:27:40,440 --> 00:27:41,960
Wondered if you could give us an estimate
of sleep last night. Over.

214
00:27:41,960 --> 00:27:48,960
SC (Garbled) Okay. I'll take a guess at 10,
11 and try to give us (garbled)….CDR 3 and

215
00:27:59,149 --> 00:28:01,980
LMP 4.

216
00:28:01,980 --> 00:28:05,600
CAPCOM Roger. Thank you very much.

217
00:28:05,600 --> 00:28:09,049
SC And Charlie, you want the (garbled) cycling, right?

218
00:28:09,049 --> 00:28:16,049
CAPCOM That's affirmative and we'd like you to disable our quads Charlie and Delta. Over.

219
00:28:18,590 --> 00:28:23,320
CAPCOM Apollo i1, Houston. If it's convenient, we'd like to go through your onboard readout.

220
00:28:23,320 --> 00:28:23,720
Over.

221
00:28:23,720 --> 00:28:24,940
SC Of what?

222
00:28:24,940 --> 00:28:31,220
CAPCOM Oh, excuse me. It's on the flight plan 3102. We'd like to have Bat send RCS. Over.

223
00:28:31,220 --> 00:28:33,899
SC Ready to copy it?

224
00:28:33,899 --> 00:28:36,889
CAPCOM Roger. Go ahead.

225
00:28:36,889 --> 00:28:43,889
SC That's Charlie 370, pyro bat A 370, bat B 370, RCS 55, 65, 64, and 62. Over.

226
00:28:53,830 --> 00:29:00,830
CAPCOM Roger. We copy all that. Thank you much.

227
00:29:01,639 --> 00:29:08,639
CAPCOM Apollo 11, Houston. A couple of questions

for the moon walkers, if you got a second.

228
00:29:11,230 --> 00:29:11,990
Over.

229
00:29:11,990 --> 00:29:14,269
ARMSTRONG Go ahead.

230
00:29:14,269 --> 00:29:21,269
CAPCOM Roger, Neil. We're seeing some temperature
rises on the passive seismic experiment that

231
00:29:22,789 --> 00:29:29,340
are a little higher than normal and were wondering
if you could verify the deployed position.

232
00:29:29,340 --> 00:29:33,210
We understand it is about 40 feet from the
LM in the 11 o'clock position B. Over.

233
00:29:33,210 --> 00:29:40,210
ARMSTRONG No, it's about in the 9 or 9:30
position and I'd say it's about 50 or 60 feet.

234
00:29:48,019 --> 00:29:55,019
CAPCOM Roger. Copy. Also did you notice, was
there any indication of any dust cloud as

235
00:30:02,149 --> 00:30:04,460
you lifted off? Over.

236
00:30:04,460 --> 00:30:11,460
ARMSTRONG Not very much. There was quite a
bit of Kapton and parts of the LM that went

237
00:30:13,559 --> 00:30:20,559
out in all directions and usually in the same
distance as far as I can tell, but I don't

238

00:30:21,509 --> 00:30:24,440
remember seeing anything of a dust cloud to
speak of.

239
00:30:24,440 --> 00:30:28,620
CAPCOM Roger. I understand all you could see
was parts of the LM going out. What was your

240
00:30:28,620 --> 00:30:29,399
first comment? Over.

241
00:30:29,399 --> 00:30:36,399
ARMSTRONG I don’t remember. Just say Kapton
and other parts of the LM of staging scattering

242
00:30:37,960 --> 00:30:44,960
all around the area for great distances but
I didn't see dust.

243
00:30:54,470 --> 00:31:01,470
CAPCOM Right. Thank you very much.

244
00:31:02,730 --> 00:31:09,730
PAO This is Apollo control at 137 hours, 27
minutes. At this time, Apollo 11 is traveling

245
00:31:13,370 --> 00:31:20,370
at a speed of about 4982 feet per second.
At about 5900 nautical miles from the moon,

246
00:31:27,889 --> 00:31:34,889
and about 198 900 nautical miles from earth.
A short while ago, you heard Neil Armstrong

247
00:31:36,549 --> 00:31:43,549
make a few descriptive comments of the scene
on the lunar surface at the time the planned

248
00:31:49,210 --> 00:31:56,210
ascent stage lifted off. Armstrong reported

seeing very little dust, but quite a bit of

249
00:31:57,759 --> 00:32:04,759
debris from the LM. He referred to the Kapton,
which is a plastic-like insulation material

250
00:32:08,990 --> 00:32:15,990
generally silver or gold in color which is
found on the outside surface of the LM. And,

251
00:32:21,080 --> 00:32:28,080
we also had a report at 136 hours, 54 minutes,
about 40 minutes or so ago, that the LM guidance

252
00:32:37,220 --> 00:32:44,220
computer had finally stopped putting out any
data, and that was about 7 hours, 13 minutes

253
00:32:46,779 --> 00:32:53,779
after the primary guidance system was deprived
of the coolant, in a test of how the system

254
00:32:54,970 --> 00:33:01,970
would continue to operate without coolant.
The platform apparently begin to become unusable

255
00:33:03,929 --> 00:33:10,929
after about 4 hours and the computer itself
finally gave up after about 7 hours and 13

256
00:33:12,190 --> 00:33:19,190
minutes. Both items going considerably, considerably
longer than had previously been predicted.

257
00:33:25,480 --> 00:33:31,019
The lunar module ascent stage still in lunar
orbit. We are continuing to get data from

258
00:33:31,019 --> 00:33:38,019
it. Ail other systems appear to be functioning

well at this time. The LM orbit we show is

259
00:33:42,009 --> 00:33:49,009
currently 64.4 nautical miles for height of
apocynthion, 54.4 nautical miles for pericynthion.

260
00:33:52,289 --> 00:33:59,289
And the LM is in its 23rd revolution, and
here's a call to the crew.

261
00:34:00,399 --> 00:34:01,740
CAPCOM Over.

262
00:34:01,740 --> 00:34:08,740
SC Thank you, Charlie, and I think we'll bring
you up to date on our chlorination status.

263
00:34:13,120 --> 00:34:19,190
In compartment B4, we have 1, 2, 3, 4, 5,
6, 7 - correction - we have 8 pockets for

264
00:34:19,190 --> 00:34:26,190
chlorine and buffer ampules of which - let
me correct that. We have 7 pockets of which

265
00:34:30,220 --> 00:34:37,220
one is empty and always has been empty, leaving
6 remaining. In the other side, over there

266
00:34:41,380 --> 00:34:48,380
in the BT, we have another container with
7 pockets, so we have a total of 7 plus 6

267
00:34:51,480 --> 00:34:58,480
and those are filled with 6 chlorines and
7 buffers. Now I've been using one chlorine

268
00:34:58,610 --> 00:35:05,380
and one buffer per day which, at this point
and time, prior to this chlorination I'm about

269
00:35:05,380 --> 00:35:12,380
to do, leaves me one chlorine and two buffers.
Seems to me I'm one chlorine short, and that

270
00:35:14,130 --> 00:35:21,130
being the case, I'd like to ask your advice
on postponing this chlorination using the

271
00:35:21,920 --> 00:35:28,920
last container until some later date like
maybe tomorrow. Over.

272
00:35:37,570 --> 00:35:44,570
CAPCOM Roger. We copy, Mike. Stand by.

273
00:36:08,190 --> 00:36:15,190
CAPCOM Hello Apollo 11, Houston. Check in
A1, Mike, and see what you can find in there.

274
00:36:24,140 --> 00:36:31,140
Over. We think you might have some more chlorine
up in Al. Over.

275
00:36:55,890 --> 00:37:02,890
CAPCOM Hello Apollo 11, Houston. Apollo 11,
Houston. Do you read? You're breaking up.

276
00:37:48,950 --> 00:37:50,070
Over.

277
00:37:50,070 --> 00:37:54,550
SC Roger. We hear.

278
00:37:54,550 --> 00:38:01,550
CAPCOM Roger, 11. You're breaking up. Mike,
please look in component Al. We think there

279
00:38:03,090 --> 00:38:10,090

might be some more chlorine up there. Over.

280
00:38:21,520 --> 00:38:28,520
SC Eureka!

281
00:38:38,810 --> 00:38:45,810
CAPCOM 11, Houston. Reading you about 1 by. Over.

282
00:39:54,680 --> 00:40:01,680
CAPCOM Apollo 11, Houston. We're having a downlink problem, the reason we can't read

283
00:40:40,200 --> 00:40:47,200
you. We're switching sides. Stand by. Hello Apollo 11, Houston. How do you read now? Over.

284
00:40:54,150 --> 00:40:56,500
SC Fine.

285
00:40:56,500 --> 00:41:03,500
CAPCOM Rog. You're 5 by on that too, Mike. Thank you much. Did you copy that about Al

286
00:41:09,880 --> 00:41:14,490
on that chlorine?

287
00:41:14,490 --> 00:41:18,900
SC Eureka!

288
00:41:18,900 --> 00:41:25,900
CAPCOM How about that, sports fans?

289
00:41:32,120 --> 00:41:39,120
CAPCOM Apollo 11, Houston. We're having a little trouble getting the yaw rate damped

290
00:41:39,570 --> 00:41:45,590
out to the appropriate value. We'd like you

all to be quiet like mice for a couple of

291
00:41:45,590 --> 00:41:52,040
minutes and let's see if that'll help it
out. Over.

292
00:41:52,040 --> 00:41:59,040
CAPCOM 11, Houston. You did great work there.
We're ready to spin it up. Over.

293
00:42:00,660 --> 00:42:07,250
CAPCOM 11, Houston. Did you copy? Over.

294
00:42:07,250 --> 00:42:14,250
SC Yes. We read you, Charlie? Would you stand
by a minute?

295
00:42:18,770 --> 00:42:22,460
CAPCOM Roger. No hurry.

296
00:42:22,460 --> 00:42:29,460
CAPCOM 11, Houston. Shift change time here.
White team bids you good night. We'll see

297
00:42:33,450 --> 00:42:33,820
you tomorrow. Over.

298
00:42:33,820 --> 00:42:34,430
SC Okay, Charlie. Thank you.

299
00:42:34,430 --> 00:42:35,040
SC Night, Charlie. Thank you.

300
00:42:35,040 --> 00:42:35,290
SC Adios.

301
00:42:35,290 --> 00:42:39,740
CAPCOM Adios. Thanks again, for a great show,
you guys.

302
00:42:39,740 --> 00:42:46,740
SC Thanks for a great show down there.

303
00:42:50,140 --> 00:42:57,140
PAO This is Apollo Control at 137 hours 52
minutes. Apollo 11 crew has signed off for

304
00:43:00,770 --> 00:43:07,770
the night, starting a well-deserved rest period.
Duration of the rest period is programmed

305
00:43:12,060 --> 00:43:19,060
for 10 hours, however, the wake up time is
not critical. It's very likely that we'll

306
00:43:20,530 --> 00:43:27,530
let them sleep 'til they wake up of their
own accord. At this time Columbia is 7,045

307
00:43:37,530 --> 00:43:44,530
nautical miles away from the moon, headed
toward home at a velocity of 4,868 feet per

308
00:43:45,820 --> 00:43:48,290
second.

309
00:43:48,290 --> 00:43:55,290
PAO This is Apollo Control at 138 hours 02
minutes. CAPCOM Owen Garriott has just put

310
00:43:56,570 --> 00:44:02,700
in a call to the crew and is passing up some
antenna information to them. Here's that conversation.

311
00:44:02,700 --> 00:44:09,700
CAPCOM Howdy there, Mike. We're ready to go
ahead and have you put your OMNI position

312

00:44:12,750 --> 00:44:19,750
for your sleep period, and we would like the
following high gain put positions: your high

313
00:44:20,290 --> 00:44:27,290
gain antenna in MANUAL, beam was WIDE, pitch
is minus 50, and yaw is a plus 270 and just

314
00:44:31,890 --> 00:44:38,410
follow the flight plan for remaining comm
configuration. Over.

315
00:44:38,410 --> 00:44:45,410
SC Roger. (garbled)…pretty hard.

316
00:44:46,960 --> 00:44:53,960
CAPCOM Your comm is pretty weak at this point,
Mike. Please say again.

317
00:44:58,070 --> 00:45:01,820
SC Roger. (Garbled).

318
00:45:01,820 --> 00:45:08,820
PAO That coming at 137 hours 55 minutes elapsed
time. At that time the battery power fell

319
00:45:18,830 --> 00:45:25,830
below the level where the secondary guidance
system could hold the attitude of the vehicle

320
00:45:25,940 --> 00:45:32,940
within the steerable of antenna limits. We
do not expect to establish contact with Eagle

321
00:45:36,000 --> 00:45:43,000
again. We'll continue to stand by here live.
There may be a bit little more conversation

322
00:45:46,280 --> 00:45:53,280
before the crew turns in for the night.

323
00:45:54,880 --> 00:46:01,880
CAPCOM Apollo 11, Houston. We'd like for you
to go ahead and put on S-Band antenna OMNI

324
00:46:05,230 --> 00:46:12,230
to OMNI and OMNI B. Over.

325
00:46:15,060 --> 00:46:22,060
CAPCOM Apollo 11, Houston. How do you read
me through Honeysuckle now? Over.

326
00:47:07,620 --> 00:47:14,620
SC You're loud and clear. Over.

327
00:47:31,880 --> 00:47:38,880
CAPCOM Very good. Reading you better now and
did you copy we'd appreciate going S-Band

328
00:47:48,780 --> 00:47:53,060
OMNI and OMNI B at this time? Over.

329
00:47:53,060 --> 00:47:55,850
SC Roger. (Garbled).

330
00:47:55,850 --> 00:48:02,850
CAPCOM Okay, thank you.

331
00:48:10,390 --> 00:48:17,390
SC (Garbled).

332
00:48:35,730 --> 00:48:42,730
PAO This is Apollo Control at 138 hours 11
minutes. We do not intend to contact the crew

333
00:48:55,270 --> 00:49:02,270
during this rest period again. We will take
this lying down now and come back up if there