Apollo 11 Air-to-Ground *Voice Transcription*

National Aeronautics and Space Administration

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11

Introduction

This is the transcription of the Technical Air-to-Ground Voice Transmission (GOSS NET 1) from the Apollo 11 mission.

Communicators in the text may be identified according to the following list.

Spacecraft:

CDR	Commander	Neil A. Armstrong
CMP	Command module pilot	Michael Collins
LMP	Lunar module pilot	Edwin E. Aldrin, Jr.
SC	Unidentifiable crewmember	
MS	Multiple (simultaneous) speakers	
LCC	Launch Control Center	

Mission Control Center:

CC	Capsule Communicator (CAP COMM)
F	Flight Director

Remote Sites:

CT	Communications Technician (COMM TECH)

Recovery Forces:

HORNET	USS Hornet
R	Recovery helicopter
AB	Air Boss

A series of three dots (...) is used to designate those portions of the communications that could not be transcribed because of garbling. One dash (-) is used to indicate a speaker's pause or a self-interruption and subsequent completion of a thought. Two dashes (- -) are used to indicate an interruption by another speaker or a point at which a recording was terminated abruptly.

Tapes 66/4 to 66/12

04 06 33 09 LMP EAGLE — ... 10 ... 10 percent ...

04 06 33 41 CC — Columbia, Houston. We've lost them. Tell them to go aft OMNI. Over.

04 06 33 51 CMP COLUMBIA — They've lost you. Use the OMNI's again.

04 06 34 01 LMP EAGLE — ...

04 06 34 05 CMP COLUMBIA — Say again, Neil?

04 06 34 07 LMP EAGLE — I'll leave it in SLEW. Relay to us. See if they have got me now. I've got good signal strength in SLEW.

04 06 34 13 CMP COLUMBIA — Okay. You should have him now, Houston.

04 06 34 16 CC — Eagle, we've got you now. It's looking good. Over.

04 06 34 23 CC — Eagle - -

04 06 34 24 LMP EAGLE — - - descent looks good.

04 06 34 25 CC — Eagle, Houston. Everything is looking good here. Over.

04 06 34 29 LMP EAGLE — Roger. Copy.

04 06 34 34 CC — Eagle, Houston. After yaw around, angles: S-band pitch, minus 9, yaw plus 18.

04 06 34 46 LMP EAGLE — Copy.

04 06 34 59 LMP EAGLE — AGS and PNGS agree very closely.

04 06 35 01 CC — Roger.

04 06 35 14 LMP EAGLE — Beta ARM. Altitudes are a little high.

04 06 35 45 LMP EAGLE — Houston. I'm getting a little fluctuation in the AC voltage now.

04 06 35 51 CC — Roger.

04 06 35 52 LMP EAGLE — Could be our meter, maybe, huh?

04 06 35 54 CC — Stand by. Looking good to us. You're still looking good at 3, coming up 3 minutes.

04 06 36 13 LMP EAGLE — ... real good. ... about on.

04 06 36 18 CDR EAGLE — Our position checks downrange show us to be a little long.

04 06 36 21 CC — Roger. Copy.

04 06 36 24 LMP EAGLE — AGS has gone about 2 feet per second greater ...

04 06 36 36 CDR EAGLE — ... ought to be ... Stand by.

04 06 36 43 LMP EAGLE — Altitude ...

04 06 37 00 LMP EAGLE — ... it's going to stop.

04 06 37 18 CC — Eagle, Houston. You are GO to continue - -

04 06 37 19 LMP EAGLE — ... closed ... GO ... at 4 minutes.

04 06 37 22 CC — Roger. You are GO - You are GO to continue powered descent. You are GO to continue powered descent.

04 06 37 30 LMP EAGLE — Roger.

04 06 37 35 CC — And, Eagle, Houston. We've got data dropout. You're still looking good.

04 06 38 04 LMP EAGLE — ... PGNS. We got good lock-on. Altitude lights OUT. DELTA-H is minus 2 900.

04 06 38 18 CC — Roger. We copy.

04 06 38 20 LMP EAGLE — Got the Earth right out our front window.

04 06 38 23 CDR EAGLE — Houston, you're looking at our DELTA-H?

04 06 38 25 CC — That's affirmative.

04 06 38 26 CDR EAGLE — PROGRAM ALARM.

04 06 38 28 CC — It's looking good to us. Over.

04 06 38 30 CDR EAGLE — It's a 1202.

04 06 38 32 LMP EAGLE — 1202.

04 06 38 48 CDR EAGLE — Give us a reading on the 1202 PROGRAM ALARM.

04 06 38 53 CC — Roger. We got - We're GO on that alarm.

04 06 38 59 CDR EAGLE — Roger. P30.

04 06 39 01 CC — 6 plus 25, throttle down - -

04 06 39 02 LMP EAGLE — Looks like about 820 -

04 06 39 03 CC — - - 6 plus 25, throttle down.

04 06 39 06 CDR EAGLE — Roger. Copy. 6 plus 25.

04 06 39 14 LMP EAGLE — Same alarm, and it appears to come up when we have a 1668 up.

04 06 39 17 CC — Roger. Copy.

04 06 39 23 CC — Eagle, Houston. We'll monitor your DELTA-H.

04 06 39 24 LMP EAGLE — ... worked out beautifully.

04 06 39 28 CC — DELTA-H - -

04 06 39 29 LMP EAGLE — ... looks good now.

04 06 39 30 CC — Roger. DELTA-H is looking good to us.

04 06 39 34 LMP EAGLE — Ah! Throttle down - -

04 06 39 35 CDR EAGLE — Throttle down on time!

04 06 39 36 CC — Roger. We copy throttle down - -

04 06 39 37 LMP EAGLE — - - ... throttles down. Better than the simulator.

04 06 39 42 CC — Roger.

04 06 39 48 LMP EAGLE — AGS and PGNS look real close.

04 06 40 08 CC — At 7 minutes, you're looking great to us, Eagle.

04 06 40 13 LMP EAGLE — Okay. I'm still on SLEW so we may tend to lose as we gradually pitch over. Let me try AUTO again now and see what happens.

04 06 40 21 CC — Roger.

04 06 40 23 LMP EAGLE — Okay. Looks like it's holding.

04 06 40 24 CC — Roger. We got good data.

04 06 40 49 CC — Eagle, Houston. It's descent 2 fuel to MONITOR. Over.

04 06 40 55 CDR EAGLE — Going to 2.

04 06 41 01 LMP EAGLE — Give us an estimated switchover time please, Houston.

04 06 41 05 CC — Roger. Stand by. You're looking great at 8 minutes.

04 06 41 10 LMP EAGLE — At 7000 -

04 06 41 12 CC — Eagle, you've got 30 seconds to P64.

04 06 41 15 LMP EAGLE — ... Roger.

04 06 41 27 CC — Eagle, Houston. Coming up 8 30; you're looking great.

04 06 41 35 LMP EAGLE — P64.

04 06 41 37 CC — We copy.

04 06 41 51 CC — Eagle, you're looking great. Coming up 9 minutes.

04 06 42 05 CDR EAGLE — Manual attitude control is good.

04 06 42 08 CC — Roger. Copy.

04 06 42 10 CC — Eagle, Houston. You're GO for landing. Over.

04 06 42 17 LMP EAGLE — Roger. Understand. GO for landing. 3000 feet. PROGRAM ALARM.

04 06 42 19 CC — Copy.

04 06 42 22 LMP EAGLE — 1201

04 06 42 24 CDR EAGLE — 1201.

04 06 42 25 CC — Roger. 1201 alarm. We're GO. Same type. We're GO.

04 06 42 31 LMP EAGLE — 2000 feet. 2000 feet. Into the AGS, 47 degrees.

04 06 42 35 CC — Roger.

04 06 42 36 LMP EAGLE — 47 degrees.

04 06 42 41 CC — Eagle, looking great. You're GO.

04 06 42 58 CC — Roger. 1202. We copy it.

04 06 43 01 LMP EAGLE — 35 degrees. 35 degrees. 750. Coming down to 23.

04 06 43 07 LMP EAGLE — 700 feet, 21 down, 33 degrees.

04 06 43 11 LMP EAGLE — 600 feet, down at 19.

04 06 43 15 LMP EAGLE — 540 feet, down at - 30. Down at 15.

04 06 43 26 LMP EAGLE — At 400 feet, down at 9.

04 06 43 29 LMP EAGLE — ... forward.

04 06 43 32 LMP EAGLE — 350 feet, down at 4.

04 06 43 35 LMP EAGLE — 30, ... one-half down.

04 06 43 42 LMP EAGLE — We're pegged on horizontal velocity.

04 06 43 46 LMP EAGLE — 300 feet, down 3 1/2, 47 forward.

04 06 43 51 LMP EAGLE — ... up.

04 06 43 52 LMP EAGLE — On 1 a minute, 1 1/2 down.

04 06 43 57 CDR EAGLE — 70.

04 06 44 04 LMP EAGLE — Watch your shadow out there.

04 06 44 07 LMP EAGLE — 50, down at 2 1/2, 19 forward.

04 06 44 13 LMP EAGLE — Altitude-velocity light.

04 06 44 16 LMP EAGLE — 3 1/2 down, 220 feet, 13 forward.

04 06 44 23 LMP EAGLE — 11 forward. Coming down nicely.

04 06 44 24 LMP EAGLE — 200 feet, 4 1/2 down.

04 06 44 26 LMP EAGLE — 5 1/2 down.

04 06 44 31 LMP EAGLE — 160, 6 - 6 1/2 down.

04 06 44 33 LMP EAGLE — 5 1/2 down, 9 forward. That's good.

04 06 44 40 LMP EAGLE — 120 feet.

04 06 44 45 LMP EAGLE — 100 feet, 3 1/2 down, 9 forward. Five percent.

04 06 44 51 LMP EAGLE — ...

04 06 44 54 LMP EAGLE — Okay. 75 feet. There's looking good. Down a half, 6 forward.

04 06 45 02 CC — 60 seconds.

04 06 45 04 LMP EAGLE — Lights on. ...

04 06 45 08 LMP EAGLE — Down 2 1/2. Forward. Forward. Good.

04 06 45 17 LMP EAGLE — 40 feet, down 2 1/2. Kicking up some dust.

04 06 45 21 LMP EAGLE — 30 feet, 2 1/2 down. Faint shadow.

04 06 45 25 LMP EAGLE — 4 forward. 4 forward. Drifting to the right a little. Okay. Down a half.

04 06 45 31 CC — 30 seconds.

04 06 45 32 CDR EAGLE — Forward drift?

04 06 45 33 LMP EAGLE — Yes.

04 06 45 34 LMP EAGLE — Okay.

04 06 45 40 LMP EAGLE — CONTACT LIGHT.

04 06 45 43 LMP EAGLE — Okay. ENGINE STOP.

04 06 45 45 LMP EAGLE — ACA - out of DETENT.

04 06 45 46 CDR EAGLE — Out of DETENT.

04 06 45 47 LMP EAGLE — MODE CONTROL - both AUTO. DESCENT ENGINE COMMAND OVERRIDE - OFF. ENGINE ARM - OFF.

04 06 45 52 LMP EAGLE — 413 is in.

04 06 45 57 CC — We copy you down, Eagle.

04 06 45 59 CDR TRANQ — Houston, Tranquility Base here.

04 06 46 04 CDR TRANQ — **THE EAGLE HAS LANDED.**

04 06 46 06 CC — Roger, Tranquility. We copy you on the ground. You got a bunch of guys about to turn blue. We're breathing again. Thanks a lot.

04 06 46 16 CDR TRANQ — Thank you.

04 06 46 18 CC — You're looking good here.

04 06 46 23 CDR TRANQ — Okay. We're going to be busy for a minute.

04 06 46 25 LMP TRANQ — MASTER ARM, ON. Take care of the ... I'll get this ...

04 06 46 38 LMP TRANQ — Very smooth touchdown.

04 06 46 52 LMP TRANQ — ...

04 06 47 03 LMP TRANQ — Okay. It looks like we're venting the oxidizer now.

04 06 47 06 CC — Roger, Eagle. And you are STAY for - -

04 06 47 08 LMP TRANQ — ...

04 06 47 09 CC — - - T1. Over. Eagle, you are STAY for T1.

04 06 47 12 CDR TRANQ — Roger. Understand, STAY for T1.

04 06 47 15 CC — Roger. And we see you venting the OX.

04 06 47 20 LMP TRANQ — Roger.