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MSC-07633

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APOLLO 17 COMMAND MODULE ONBOARD VOICE TRANSCRIPTION (U)

RECORDED ON THE DATA STORAGE EQUIPMENT (DSE)

[redacted]

GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

[redacted]

This material contains information [redacted] national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

[redacted]

[redacted]

SECURITY CLASSIFICATION

The material contained herein has been transcribed into a working paper in order to facilitate review by interested MSC elements. This document, or portions thereof, may be declassified subject to the following guidelines:

Portions of this document will be classified CONFIDENTIAL, Group 4, to the extent that they: (1) define quantitative performance characteristics of the Apollo Spacecraft, (2) detail critical performance characteristics of Apollo crew systems and equipment, (3) provide technical details of significant launch vehicle malfunctions in actual flight or reveal actual launch trajectory data, (4) reveal medical data on flight crew members which can be considered privileged data, or (5) reveal other data which can be individually determined to require classification under the authority of the Apollo Program Security Classification Guide, SCG-11, Rev. 1, 1/1/66.

[redacted]

INTRODUCTION

This document is the transcription of the Apollo 17 flight crew communications as recorded on the command module (CM) data storage equipment (DSE) and subsequently transmitted (dumped) to Manned Space Flight Network stations. Magnetic tapes containing dumped voice and onboard-recorded ground elapsed time (GET) were forwarded to the NASA Manned Spacecraft Center, Houston, Texas. Transcription of these tapes was managed by J. L. Gibbons, Test Division, Apollo Spacecraft Program Office, to whom inquiries regarding this document should be referred.

The transcript is divided into three columns — time, speaker, and text. The time column consists of four two-digit pairs representing days, hours, minutes, and seconds (e.g., 04 22 34 14). The speaker column indicates the source of a transmission; the text column contains the verbatim transcript of the communications.

The time used by Mission Control Center (MCC) and indicated as GET in the flight plan may be updated to both the spacecraft and MCC computers but will <u>not</u> be updated to the telemetry downlink pulse-code-modulated bitstream or other time-recording devices. This GET updating will be performed only to correct significant changes in flight-plan time occurring as the result of delayed lift-off, midcourse corrections, or spacecraft burn-time differences (trajectory dispersions).

Should these updates occur, the Apollo elapsed time (the true mission-elapsed time) may not agree with flight-plan and MCC times. Users of this transcript are cautioned to apply the appropriate time-update deltas for the updated periods.

Speakers in the transcript are identified as follows:

Spacecraft:

CDR	Commander	Eugene A. Cernan
CMP	Command module pilot	Ronald E. Evans
LMP	Lunar module pilot	Harrison P. (Jack) Schmitt
SC	Unidentifiable crewmember	
MS	Multiple speakers	

[redacted]

Mission Control Centers:

CC	Capsule communicator (CAP COMM)
LCC	Launch control center

In the text, 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. Two dashes (- -) are used to indicate an interruption by another speaker or a point at which a recording was abruptly terminated. Words given unusual emphasis by the speaker are underlined.

The Apollo 17 mission was flown December 7 to 19, 1972; lift-off occurred at 05:33:00.60 G.m.t. (12:33:00.60 a.m., e.s.t.) on December 7. The CM was designated America and the lunar module was called Challenger.

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03456

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER VAN DURING EARTH ORBIT

Time Segments (AET)

From	To
00 00 09 40	00 00 11 54
00 00 15 24	00 00 50 44

Recorded time off by approximately 1 hr 13 min 19 sec according to air-to-ground transcript. Time on these segments has been corrected.

Voice fair to good; bad intermittent static.

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[redacted]

00 00 09 40	LMP	... a second.
	CDR	Well, you watch ... Let's - let's press on here. We got a ... to do.
	LMP	We're Mode IV?
	CMP	Yes.
	CDR	Okay, we're at a little less than a half a g.
	CMP	Less than half a g. Coming up on - -
	CDR	Okay, at 10 minutes, Ron, I'll be at about 40 ... - -
00 00 09 57	CC	17, the steering has converged *** great.
	CDR	Roger. The CMC is GO, 10 minutes, and 17 is GO on board.
	CMP	H-dot's a little bit low; not bad.
00 00 10 08	CC	17, Houston. You are GO for orbit - GO for orbit.
	CDR	Those are kind words, Robert. We're GO for orbit here.
	CC	*** show, Gene
	CDR	Okay, coming up on 30, Ron - -
	CMP	Okay.
	CDR	- - double check everything.
	CMP	30, 347 degrees; 93.5 - Okay, we're a little bit high.
	CDR	Couldn't read a star if I had to.
	LMP	I couldn't either.
	CMP	Velocity's a little high.
00 00 10 32	CDR	Okay, 10:30 and we're GO.
	CMP	H-dot's a little high. ... - -

[redacted]

	CC	Roger, 17. You look great.
	CDR	Okay, to cut off the DI [?] equipment under ... control.
	CMP	Okay, I'll catch that.
	LMP	I sure don't want to hit this handle.
	CMP	No ... 25 - -
	LMP	Apogee.
	CDR	Mode IV right now; coming up on 11 minutes.
	CMP	Okay, 11 minutes and I'm 344 degrees. That's right on the money. How's the cabin, Jack?
	LMP	Cabin's great.
	CMP	Okay, velocity's a little bit high; H-dot's a little bit negative.
00 00 11 05	CDR	Eleven minutes and we are GO.
00 00 11 07	CC	Roger, Gene. And cut-off will be at 11 plus 47, 11 plus 47.
	CMP	H-dot's a little high. But that's all right.
00 00 11 13	CDR	11 plus 47. Roger.
	CMP	... okay, 500 feet to go.
	CMP	... 500.
	LMP	... Apogee they're checking it whether ...
	CMP	(Laughter) Oh, yes?
	LMP	... I'd like a ...
00 00 11 32	CDR	Okay; 11:30 and we're GO here. And - Standing by.
	CC	Roger, Gene. *** time is still holding good, 11 plus 47.
	LMP	Okay, ... you on a ...

[redacted]

	CDR	Why?
	CMP	... There she goes!
00 00 11 42	CDR	Okay, cut-off at 42.
	CMP	Don't worry. Well, that's the ... - -
	CC	*** Cut-off at 42. *** copy.
	CMP	Okay, let's - -
	CDR	Okay, 25596, Ron.
00 00 11 54	CMP	25 - 25596. Okay, KEY RELEASE it. Plus 1 - -

TIME SKIP

[redacted]

00 00 15 24	CDR	We got that, babe. We'll see you coming around.
	CC	Good show, babe. A little late but a good show.
	CMP	Outstanding ride.
00 00 15 34	LMP	EMS FUNCTION, OFF.
00 00 15 35	CDR	Okay, it's OFF.
	LMP	TRANS CONTROL POWER, OFF.
00 00 15 38	CDR	TRANS CONTROL POWER is OFF.
	LMP	ROT CONTROL POWER, DIRECT, two, - -
	CDR	They're OFF.
	LMP	- - DIRECT, two, OFF.
	CDR	They're OFF.
	LMP	BMAG MODE, three, RATE 2.
00 00 15 46	CDR	Okay, RATE 2.
	LMP	CM RCS LOGIC, OFF.
00 00 15 49	CDR	CM RCS LOGIC is OFF.
00 00 15 54	LMP	LAUNCH VEHICLE STAGE switch, OFF, verify.
00 00 15 54	CDR	Okay. Yes, sir. It is OFF.
	LMP	Okay. Rotational hand controllers 1 and 2, locked.
00 00 15 58	CDR	They're locked.
	LMP	CABIN PRESSURE RELIEF VALVE, two NORMAL and latched.
00 00 16 02	CDR	NORMAL and latched.
	LMP	REPRESS PACKAGE valve, OFF.
00 00 16 05	CDR	Okay, I'm going to have to loosen up here and get at that.

[redacted]

LMP Okay, I'll hold that one. Circuit breaker - That's me. Okay, let me -

CMP Hoo hoo.

LMP Okay.

CMP (Laughter) Here we go. ... press - pressure ... - -

LMP Okay, that - that's that circuit breaker.

CDR Oh, okay. That's pushing that in there.

LMP Yes, I'd forgotten all about that. I should have warned you.

CDR Okay.

CMP Okay.

LMP That's something ... since the chamber, I guess.

CDR Okay.

00 00 16 29 LMP Okay. And install the COAS.

CDR Okay, I'm going to loosen up, get out of my helmet here and pick up ... - -

LMP Whoops excuse me, gang. That was me.

CMP Wow! That's a good one.

CDR Oh, man!

CMP That is a goodie!

CDR Still have to get out of my helmet.

CMP Whoo. Whoo!

LMP Okay, low.

CMP Hey, you guys care if I turn some lights on down there so I can see?

CDR Go ahead. Turn them on.

[redacted]

	CMP	(Chuckle)
	LMP	Okay, what do we do down here?
	CDR	Okay, Jack, you - pick up something here before the COAS.
	LMP	What is that?
00 00 17 02	CMP	O_2 HIGH FLOW.
	CDR	O_2 FLOW; okay. That's because I'm going to have to pull the -
	LMP	Yes, you've got to change it - -
	CMP	You got your helmet off?
	CDR	Yes.
	CMP	You got your helmet off?
	CDR	Yes, I'm going to have to pull the repress or the -
	LMP	Yes.
	CMP	Oh, you cycle the SUIT CIRCUIT RETURN. Okay.
	CDR	Open - -
	LMP	Yes.
	CDR	Open it. Open it.
	CMP	I'll go - I'll go down and close the -
	CDR	Jack - -
	CMP	Purge - purge the cabin pressure.
	CDR	Did you give me something before the - before the COAS?
	LMP	No. Oh, yes, the REPRESS PACKAGE valve, OFF.
00 00 17 31	CDR	Okay. Let me get REPRESS PACKAGE valve, OFF. Look at those aps - that amplifier.

[redacted]

	LMP	And let me know when you get COAS.
	CDR	Okay. Stand by.
	LMP	Because I checked it inadvertently here.
	CDR	Okay. No problem. I'm not going to get the COAS until I get my helmet out of the way.
	LMP	Okay.
	CMP	(Singing)
	CDR	We got the major things here. Ron can work on the optics, and I'll get the ...
	CMP	Couldn't we get the cabin pressure - EMERGENCY CABIN PRESSURE at BOTH?
	CDR	Okay.
	LMP	You want to - Okay, what did you want to do, Ron?
	CMP	Put the EMERGENCY CABIN PRESSURE at BOTH.
	LMP	Okay, do that.
	LMP	Then we'll take our helmets and gloves off.
00 00 18 06	LMP	Okay, and SUIT CIRCUIT RETURN VALVE.
	CMP	I keep floating up to the top of the tunnel.
	CDR	Huh?
	LMP	Yes, that's because we're in ORB RATE. Don't forget.
	CMP	Oh, yes.
	CDR	Okay, the O_2 flow is down.
	LMP	What a ride that booster is.
	CDR	Okay.
	LMP	What a ride that booster is.

[redacted]

	CDR	Yes, isn't that something?
	CMP	Man, that is a ride.
	CDR	And the best thing to do, Jack, while you're in the suit, is to stay in the seat, loosely buckled.
	LMP	Yes, sir. What's that?
	CDR	Okay, I don't know what that was. That was a spurious alarm.
00 00 18 42	CMP	Hmm. Well, you got to -
	LMP	There was no caution and warning with that.
	CDR	Okay.
	LMP	Let me check my lamps. Checking lamps, gang.
	CMP/CDR	Okay.
	LMP	Good. Those are good.
	CDR	Whoops.
	LMP	That was it again.
	CDR	What are you seeing?
	LMP	Well, I see nothing. They're transients.
	CDR	Look at your - look at your gages.
	LMP	They're not triggering the caution and warning.
	CMP	Maybe we're getting just a caution and warning transient of some kind, huh?
00 00 19 24	LMP	Three of them right in here.
	CDR	Jack, you don't want your helmet back yet, huh?
	LMP	Oh, I can take it any time, Geno - -
	CDR	Okay.
	LMP	- - and get it out of the way over here.

[redacted]

CDR Okay, here's your helmet, Jack.

LMP Sure.

CDR And, Ron, do you want yours?

CMP Yes, I may as well get it out of the way.

CDR Get it out of the way.

CMP Get it ... here.

CDR Okay, here's yours.

CMP Okay, got it.

CDR Okay. And you're going to be - I don't know when you get into daylight, but your optics is your next -

CMP Next thing here, as soon as I get my - old helmet and gloves off.

CDR Man, I tell you that booster ride is something to behold.

CMP Gee whiz! I guess I wasn't quite prepared for the shaking and vibration until the thing lifted off.

CDR Okay, give that hatch is - -

00 00 20 12 LMP Let me know when you're ready for checklist stuff.

CDR Okay.

LMP Cabin still looks good.

CDR Let me tell you, those people down there must have had something worth waiting for. We saw that light before we left the pad. Did you guys see that? You saw it out your window, Ron? Jack's ... - -

CMP Yes.

LMP I didn't - -

CMP I saw - -

[redacted]

	LMP	I didn't see anything.
	CDR	I saw it out my window. Not enough to blind anything.
	CMP	Yes, not enough to blind anything but you could sure see it there.
00 00 20 51	CDR	Boy, I tell you, I'm sure glad I didn't have to use any SPS stars out there. I never would have seen them. Look at that. Okay, here you go. Your first sight. You're looking to watch the sunrise. Jack, get out here.
	CMP	Oh, there it is. Wait a minute. I can't see it!
	CDR	Get out here, babe.
	LMP	Look at that.
	CDR	Come on out my window over here.
	CDR	Wait a minute - going to watch - Can you see it out Jack's window? Just - You'll see it the next time around. But it's your first view of the Earth, babe. And it's going to be your - your best - until you get a quarter million miles away.
	CMP	Holy mackerel.
	CDR	Just keep looking.
00 00 21 26	CDR	There's some lightening out there. See it?
	LMP	Yes. Yes. I saw it. ... - -
	CDR	See it out there?
	LMP	Yes, yes. Right on the horizon.
	CDR	See those big thunderheads on the horizon?
	LMP	Yes.
	CDR	Look at the size of those things.
	CMP	Isn't that beautiful?

[redacted]

	CDR	I tell you - This is your first view of the wo - of being in orbit and that - you tell - you got the most beautiful view - -
	CMP	Look at the clouds down there. The clouds are sticking up above the horizon.
00 00 21 46	CDR	Yes, sir. What have you got 16 54 on there for, anything?
	CMP	No. You can proceed auto.
	CDR	Okay.
	LMP	I was getting for the - just to make sure we're ORB RATE.
	CDR	That's ...
	CMP	Look at those clouds.
	CDR	Yes.
	CMP	Orange.
	CDR	Pretty spectacular. You just ... - -
	CMP	Blues, blacks.
	CDR	Now, lunar sunrise won't look like that, but -
00 00 22 09	CMP	What time is it? Twenty-two. Yes, we're that much early.
	CDR	Here, I'll put that there temporarily.
	CDR	Now, you're going to see - -
	CMP	Oooh, boy.
	CDR	You see the bands come up now.
	CMP	Yes. There's the bands up.
	CMP	Must be the storms down in Africa, huh?
	CDR	Well, I don't know exactly where we are - -

[redacted]

CMP ...

CDR - - but it's south.

CMP South - Sunrise has got to be over Africa somewhere.

CDR Yes. It may be out in the Atlantic by now.

LMP I think it's out over the water now.

CDR Jack, the COAS is - is in.

LMP Okay. You ready for some more?

CDR Yes. No. Watch - watch the sunrise.

LMP There it comes.

CMP I want to watch the sunrise.

LMP It's going to come right into my eyes - That's the ... (laughter) ...

CMP Here it comes. Ka-boom.

CDR Take - take a look at it.

CMP Whoo-ee.

LMP Oh-ooh.

CDR Take a look at it.

CMP Look at that blaze!

LMP Pow!

CMP Wow!

CDR Take a look at it.

LMP Gosh darn it, yes.

CMP Ohh, that's bright!

CDR Yes, sir. Is that nice or not?

[redacted]

00 00 23 02	CMP	Oh, it's just orange! You know. It starts out orange and then gets - becomes bright, and now it looks like a ... - -
	CDR	Okay. Now go check your optics out because if they're no good, I'm going to throw you out the hatch.
	CMP	(Laughter)
	LMP	That's right. Geno -
	CMP	Okay, I got to - got to check the little optics ... - -
	CDR	Okay, I'm ready, Jack.
	LMP	Okay, I want your SM RCS HEATERS, four, to PRIMARY.
00 00 23 21	CDR	Okay. Four HEATERS to PRIMARY - 1, 2, 3, 4. They are PRIMARY.
	LMP	Okay, I want CAUTION and WARNING to NORMAL.
	CDR	Okay, CAUTION/WARNING - -
	LMP	I'll get it.
	CDR	We haven't had that MASTER ALARM again, huh?
	LMP	No.
	CDR	Okay. And while you're talking, I'm going to get the - the ORB RATE ball out - or the -
	CMP	ORDEAL?
	CDR	ORDEAL.
	CDR	Go ahead, Jack; keep talking.
	LMP	BPC. Okay, these things ... It's already JETT.
	CMP	Doggone, I'd like to give them television.
	CDR	Okay.

[redacted]

00 00 23 56	LMP	180 degrees. GN_2 valve HANDLE to VENT.
	CMP	Okay.
	LMP	I guess I'm going to have to do what you guys are doing to do that.
	CMP	It sure gets light in here, doesn't it?
	LMP	Hey, hey, Ron.
	CMP	Yes.
	LMP	Could - can you get the hatch stuff, or you want to check your optics first?
	CMP	No, I can get the hatch stuff here if I can get my - my helmet.
	LMP	A little longer ... - -
	CDR	- - ... get the optics first.
	CMP	Let me get the optics work. Okay?
	CDR	Get that cover off.
	CMP	Yes, I'm going to do that. ... off.
	CMP	Hot diggity dog.
	CDR	Did it go?
	CMP	I can't believe we've made it up here.
	CDR	Did it go?
	CMP	Ha ha!
	CDR	Did it go?
	CMP	What?
	CDR	The optics?
00 00 24 41	CMP	I don't know. I haven't done it yet (laughter).

[redacted]

	CDR	Okay, well, get on that one. That's one I want to know.
	CMP	Okay.
	CMP	Let me see ... (Singing) Do-do-do-doo do tum. Caution and warning. GDC align.
	LMP	Geno?
	CDR	Yes.
	LMP	Let me know when - -
	CMP	Okay.
	LMP	Can you reach the GN_2 vent handle?
	CDR	Yes, sir.
	LMP	Right here?
	CDR	What do you want me to do?
00 00 25 09	LMP	I want you to pull it to VENT.
	CDR	Okay, let me get around to this ... Okay. One of the things that -
	CMP	... state vector here.
	CDR	Pulling to VENT?
	LMP	Pull to VENT.
	CDR	Ron, it should go to zero, huh? All the way?
	CDR	Pull to VENT? Okay?
	LMP	Yes.
	CDR	Pull to VENT?
	LMP	Yes.
	LMP	All the way.
	CMP	That ...

[redacted]

	SC	Okay.
	CMP	Yes, I can vent it all the way, now.
00 00 25 33	CDR	You're over the Atlantic, guys, looking out your window.
	CMP	Over the Atlantic, huh?
	CDR	Best I can tell right now.
	LMP	Gosh darn. Pardon my French.
	CDR	Yes. Let me tell you. Just because you've been in orbit once, that don't mean you've been in orbit all the time.
	LMP	Hey, by the way, Ron, you and I finally qualified.
	CDR	(Laughter) We qualified, huh?
	LMP	I forgot - I was going to tell you when we went through 50 miles, but I was too busy.
	CMP	I forgot all about it.
00 00 25 58	CDR	Okay. You want this reset?
	LMP	No. Just pull to VENT.
	CMP	(Singing) Da da-da da, do do do.
	LMP	Just leave it the way it is.
	CDR	Okay. It's going to - We're going to hit it.
	LMP	It doesn't say one way or the other, Geno.
	CDR	Let me just put it back here.
	CMP	(Laughter) It's black out there.
	CDR	There is is. Okay.
	LMP	... just vent it to zero. That's all that's important.
	CDR	Okay. That's good.

[redacted]

	CMP	Let me see.
	CDR	Okay. And the hatch is neutral?
00 00 26 16	CMP	I have the OPTICS POWER ON.
	CDR	Ron, put the -
	LMP	You're right.
	CDR	Okay, what do you want me to do?
	LMP	You never got a ... Okay, you ready?
	CDR	Yes.
	CMP	Let me see.
	LMP	SM RCS. You got it?
00 00 26 26	CMP	G&N POWER is ON.
	LMP	You got SM RCS PROPELLANT talkback's eight, gray?
00 00 26 29	CDR	They're all gray.
	CDR	Yes. Okay.
	LMP	Okay - -
00 00 26 30	CMP	OPTICS, ZERO to OFF, and then ZERO
	LMP	- - HELIUM 1 and 2, eight, gray.
00 00 26 33	CDR	They're eight gray.
	LMP	SM RCS INDICATOR to HELIUM TANK TEMP, and check your quads.
00 00 26 38	CMP	OPTICS, ZERO -
00 00 26 40	CDR	Okay. HELIUM TANKs TEMP, and -
00 00 26 41	CMP	OPTICS MODE to MANUAL.
	LMP	And then -
00 00 26 44	CMP	OPTICS COUPLING is DIRECT.

[redacted]

00 00 26 46	CDR	Okay, all the quads are GO.
00 00 26 47	CMP	SPEED is HIGH.
	LMP	You want some numbers or you - you like them?
00 00 26 51	CDR	They're all nominal.
	LMP	Okay, check CM.
00 00 26 54	CDR	Okay, COMMAND MODULE. They're both nominal.
	LMP	You got two gray talkbacks on the propellant; they're gray. Okay, and you like the ... - you like the numbers.
	CDR	Yes.
	CMP	Okay.
	LMP	Okay, lamp test, I did.
00 00 27 10	LMP	Okay, you guys, MASTER ALARM. Stand by.
	CDR	Okay.
	LMP	Okay. That's good.
	CDR	I guess ...
	LMP	Reset.
00 00 27 20	CMP	There it is.
	CDR	What?
	LMP	Another transient.
	CDR	Another one, huh?
	LMP	It tests - almost acts if it's something to do with the -
	CMP	Okay, here goes the old optics.
	CDR	Let me know if that cover goes.

[redacted]

	CMP	1001, 1002, 1003, 1004 - Ohhhh! My gosh, there it went.
	CDR	Beautiful. That's ... over here.
	CMP	Ohhhhhh.
	LMP	Okay.
	CMP	Hey, it's floating off. It's a real bright thing. There's two pieces of it.
	CDR	Yes. That's great.
	LMP	Okay. Strut unlock lanyards, two, stow.
	CMP	Something else is flying all over the place.
	CDR	Okay.
	CMP	Yes, you can see ...
	CDR	Okay.
	CMP	Let me -
	CDR	Well - -
	CMP	Should I whip into a P52 here or - -
	CDR	I'll get Ron to do that in a minute.
	CMP	- - should I ...?
00 00 28 04	LMP	DRINKING WATER SUPPLY valve, ON.
	CDR	Okay.
	CMP	Hey, that's a good idea.
	CDR	Check those optics out or you don't get any - -
	CMP	(Laughter)
	CDR	...
	LMP	Hey, Ron. Hey, Ron, can you CLOSE the COAS TUNNEL LIGHTING MAIN B breaker down there?

[redacted]

	CMP	Yes. Just a second. Let me ...
00 00 28 17	CMP	COAS TUNNEL A and B is CLOSED.
	LMP	Okay, thank you.
	CMP	Okay.
	LMP	And we got the helmet bags and accessory bags and tool E? Would you get tool E out of L-2, please?
	CMP	... is off. Tool E out of L-2. Is that where that is?
	CDR	And that's one thing we'll need real quick.
	LMP	Okay, - -
	CDR	Want some ... - You can't get it - -
	LMP	I'll get it in a minute, Gene. I want to get squared away here and then I'll - It's just as easy this way.
	CDR	Okay.
	LMP	Let you guys be at my beck and call. If cabin pressure -
	CDR	We got to get to those radiators ...
	LMP	Is greater - -
	CMP	Get some radiators up.
	LMP	- - than 5.3, O_2 FLOW ... - -
	CMP	Oh, you kind of get stuck in these places.
	CDR	Got it, Ron?
	CMP	(Humming)
	CDR	Here comes Africa.
	LMP	Okay.

[redacted]

	CMP	(Humming) Hey, I can still see those dust covers whipping out through there.
	CDR	Okay, let's - let's press on and get this done. It's getting warm in here.
	LMP	Yes.
	CMP/LMP	Okay.
	CMP	...?
	LMP	Main reg check, Ron - whenever you're ready - You want to leave that?
	CDR	We can get the main regs later.
	LMP	Okay, secondary rad leak check.
	CDR	Oh, we can?
	LMP	Ready, Geno?
	CDR	Yes.
00 00 29 32	LMP	Okay, I'm going to SECONDARY.
	CMP	... - -
	CDR	- - ... quantity.
	LMP	SECONDARY GLYCOL to RAD valve, NORMAL for 30 seconds.
	CDR	Okay, GLYCOL to RAD, SECONDARY, NORMAL for 30 seconds, coming at you.
	LMP	And then it's going to be bypass. Give me a mark.
	CDR	...
	LMP	You got it?
	CDR	Not yet.
	CDR	Not yet. ... tool E ... off here.
	LMP	Oh.

[redacted]

	CDR	Okay, you want it NORMAL?
	LMP	NORMAL for 30 seconds.
00 00 30 04	CDR	MARK it. It's NORMAL.
	LMP	Okay.
	CMP	Hey, you can see a star.
	CDR	Well, that's what you're supposed to, babe.
	LMP	It's in the daylight, too.
	CDR	Yes.
	CDR	Look at - Did you ever see a blacker sky than that, though?
	LMP	Yes, about 2 minutes ago.
00 00 30 24	LMP	Ten more seconds, Gene.
	CDR	Okay. Is she looking good to you?
	LMP	Yes, looks good.
	CDR	Okay. ORB RATE, by the way, is tracking.
00 00 30 35	LMP	Okay, you can go to the BYPASS.
00 00 30 38	CDR	Okay, it's back to BYPASS.
	LMP	That's good.
	CDR	Okay.
	LMP	And - Okay, GLYCOL RESERVOIR BYPASS valve, OPEN.
00 00 30 47	CDR	GLYCOL RESERVOIR BYPASS is OPEN.
	LMP	Okay. GLYCOL RESERVOIR OUT valve, CLOSED.
00 00 30 52	CDR	OUT is CLOSED.
	LMP	GLYCOL RESERVOIR IN valve CLOSED.
00 00 30 55	CDR	IN is CLOSED.

[redacted]

	LMP	PRIMARY ACCUMULATOR - -
	CDR	Okay.
	LMP	- - quantity -
	CMP	Is up (chuckle).
	LMP	Interesting.
	CDR	You want to try - -
	LMP	40.
	CDR	- - try filling it?
	LMP	Yes, we're going - let's put something in it. PRIMARY ACCUM FILL valve, ON, until 50-55. I'll give you a mark.
00 00 31 18	CDR	Well, I don't know whether I meant it or not, but it looked like it was ON.
	LMP	There - Whoa.
	CDR	No. Which way?
	LMP	Turn it OFF.
	CDR	Huh?
	LMP	Turn it OFF.
	CDR	Whoops. ... - -
	LMP	That's interesting. Do it again.
	CDR	Well, it was - it looked like it was ON to me.
	LMP	It - No, it - it jumps, Geno, and - I didn't - I guess I didn't give you enough time.
	CDR	Okay, yes.
	LMP	It's only 45 now.
	CDR	Okay, try - It's ON -

[redacted]

00 00 31 36	CDR	MARK it.
	LMP	Okay.
	CDR	You got that. It was OFF. It was okay.
	CMP	Now - now turn it OFF.
	CDR	Oh, OFF?
	LMP	Yes.
00 00 31 42	CDR	Okay, it's OFF.
	LMP	Okay, I got - 50. One more time, please.
	CDR	Okay.
	LMP	For some reason, there's a - -
	CDR	Okay.
	LMP	- - there's a 10 percent bias on it.
	CDR	There's a hysteresis in it.
	LMP	Yes. No, it just holds there when it's ON. Okay, now turn it OFF.
	CDR	Okay, it's OFF.
	LMP	Good; 55. Right in there. Okay, ES - ECS flad ro - FLOW CONTROL.
	CDR	There's a little geology for you, Jack.
	LMP	I hope I can look next time.
	CDR	Okay.
00 00 32 12	LMP	Okay, FLOW CONTROL, POWER - POWER. PRIMARY GLYCOL TO RAD valve, NORMAL. Push. That's why I want to get going.
00 00 32 21	CDR	PRIMARY GLYCOL TO RAD - Push. It's NORMAL.
00 00 32 25	LMP	Okay, ECS RAD HEATER, PRIM 1. Okay, PRIM OUT below PRIM IN. We're already there. That's beautiful.

[redacted]

	CDR	That booster ride is just un - just absolutely incredible.
	LMP	Okay, ECS RAD talkback gray.
00 00 32 48	CDR	It is.
00 00 32 51	LMP	GLYCOL EVAP, TEMP IN, going to AUTO.
	CMP	I guess it's good to take a focus.
00 00 32 59	LMP	Okay. POTABLE H_2O HEATER going to MAIN A.
	CMP	... focus ...
	CDR	How's it looking to you, Ron?
	CMP	Well, I can't get the crazy thing to focus.
	LMP	Let me know when you can do a main reg check.
	CMP	Okay.
	LMP	Ready, Gene.
	CDR	Yes.
	LMP	Let's see - I'm in a fuel cell EPS. Let's see - ECS monitoring, SPS - The rest of it's mine. GDC align is - You got to do.
	CDR	I'll take care of that.
	LMP	And then there's a sequence camera unstow and a mount your ORDEAL, if you haven't.
	CDR	Okay, ORDEAL is mounted and working, and I'll wait for Ron to finish the - -
	LMP	You've done the ORDEAL?
	CDR	- - the optics.
	LMP	Okay.
	CDR	I'll wait for him to finish the optics so we can - -

[redacted]

	LMP	I guess the rest of it is pretty much mine for a while.
	CDR	Yes. Why don't you do it now?
	CMP	I can't tell - Hey, that's not so bad. Ha ha! There we go. Where's my book?
	CDR	Okay. Right above you.
	LMP	Okay, you're going to - -
	CDR	What's the temp - cabin temp, Jack?
	LMP	Huh?
	CMP	It's getting hot. Whatever it is. Cool it - yes.
	CDR	Cabin temp. Let's see if we can't cool it off.
	LMP	Cabin temp is low. Oh, cabin temp?
	CDR	Yes, sir.
	CMP	It's 65.
	CDR	It's hot in here.
	LMP	Well, let's see.
00 00 34 05	LMP	We're in MANUAL. INCREASE must be increase temperature.
	CDR	Okay, did you want me to turn the DIRECT O_2 OFF, by the way? Did you call that out ...?
	LMP	No, I didn't call it out - -
	CMP	No, no. It shouldn't be.
	LMP	No, I didn't call that.
	CDR	Okay.
	CMP	Okay.
00 00 34 20	LMP	Okay, you're going to see some MASTER ALARMs here, gang.

[redacted]

	CDR	Okay.
	LMP	Any time you get one you don't like, let me know.
	CDR	I will. We've had four spurious ones without anything else.
	LMP	What a - -
	CMP	Okay.
	LMP	There seems to be some association with the - with working the switches up here on the caution warning panel, and I'll check that out later.
	CDR	Ron, if - I just want to lock this.
	LMP	Okay, MASTER ALARM.
	CDR	Okay. There you go.
	CMP	Plus 1080 - plus 080, plus ... 0.05.
	LMP	Okay. Fuel cell 1's good.
00 00 35 03	CDR	MASTER ALARM.
	CMP	And plus 0018 - 018.
	CMP	Okay, and we'll torque those things at 35 - ... - -
00 00 35 16	LMP	Two's good.
	CDR	Okay. You torquing now?
	CMP	No, not yet.
00 00 35 21	CMP	35:10.
	CDR	It was 35:25 up here, Ron.
	CMP	Oh, really? I've got 35:10 down here.
	CDR	35:25 on two clocks up here.
	CMP	Hah!
	CDR	Okay, let me check the - the computer.

[redacted]

	CMP	Well, the event - -
	CDR	Computer is in - -
	CMP	Event timer's off a little bit, too.
00 00 35 40	CDR	The computer is - the computer is with both of our clocks up here.
	CMP	Okay. What - what time did you say it was?
	CDR	It was 35:25 when you torqued.
	CMP	35:25 then. Okay, somehow the LEB DSKY mission timer doesn't work - or it's late.
	CDR	I don't understand how that happened.
	CMP	(Laughter) ...
	CDR	Okay, why don't you put this up in the tunnel, if you can.
	CMP	Yes, I'm going to do that. Put it down here where it belongs.
	CDR	Okay, well, could you put mine down there, too, you suppose? Is there room down there to put it ... - -
	CMP	Well, you're going to ... if it - if it will stay.
	CDR	Well, I won't put it there then.
	CMP	Well, I can put it down here for the time being, but - -
	CDR	Well, that's all right. That's all right.
	LMP	Okay, that's spurious.
	CDR	That's spurious, nothing with it.
00 00 36 20	LMP	Number 5. Check my amps once more.
	CDR	You weren't checking out things and -
	CMP	Let's see ...

[redacted]

	LMP	No.
	CMP	Okay.
	LMP	... pressures. H_2/3.
	CMP	How do I get some suits cooling? Aaah.
	CDR	Okay. You ... want to get these around, too, and I'll ... your -
	CDR	Put this around.
	LMP	Okay. Another one. Seems to be something to do - It's - maybe with switching up in here. I seem to get more of them when I'm working on the switches up here. I'll keep my eye open.
00 00 37 24	CDR	Your gages all look good, huh?
	LMP	Yes, sir. I haven't found anything.
	LMP	There, you see. You did it, too.
	LMP	It's - -
	CMP	Okay.
	LMP	Possibly, it's this - these things being very low. What - -
	CDR	Just bouncing against them. Yes.
	LMP	What did - what did - Well, that was the SPS thing that Ron -
	CDR	Here you are, Ron.
	CMP	Okay.
	LMP	Hey, Ron, what was it that Gordy said about ... - -
	CMP	That's the SPS.
	LMP	That was SPS, wasn't it?
	CMP	Yes; switching

[redacted]

00 00 38 02	LMP	SURGE TANK PRESSURE. The CRYO FANS; we'll leave them the way they are.
	CDR	Okay, Ron, you can wrap those around - -
	CMP	Take that ... - -
	CDR	- - and I'll get - I'll pick the -
00 00 38 15	LMP	HEATERS are ON and up.
00 00 38 19	LMP	RAD talkbacks are gray.
	CDR	Are you happy with the optics?
	CMP	Um-hmm.
	CMP	Finally got a drink of water.
	CDR	Congratulations.
	LMP	Okay, you're - you're way back there. I'm going to purge - Okay. How about a main reg check when you get a chance, Ron?
	CMP	Anybody want a drink?
	LMP	Not right now.
	CMP	Okay.
	LMP	Okay. MAIN REG B, CLOSED.
00 00 38 59	CMP	MAIN REG B is going CLOSED.
	CDR	Okay. CABIN PRESSURE, select 1.
00 00 39 06	CMP	EMERGENCY CABIN PRESSURE's - 1.
	LMP	Push to test.
00 00 39 11	CMP	Okay, push to test.
	LMP	O_2 flow increase. Stand by; you might get a MASTER ALARM. Go ahead.
	CDR	Okay, it does. That's good.

[redacted]

	CMP	Whoo! That ... - -
	LMP	Okay, MAIN REG B, OPEN, and A, CLOSED.
00 00 39 19	CMP	Okay. B is going OPEN.
	LMP	A CLOSED?
00 00 39 23	CMP	A is CLOSED.
	CDR	EMERGENCY CABIN PRESSURE, select 2.
00 00 39 25	CMP	Okay, it's going to 2.
	LMP	Push to test.
00 00 39 28	CMP	Push to test.
	CDR	Okay, that's good here.
	LMP	MAIN REG A valve, OPEN.
00 00 39 35	CMP	MAIN REG A is OPEN.
	LMP	CABIN EMERGENCY PRESS, BOTH.
00 00 39 39	CMP	Okay. EMERGENCY CABIN PRESSURE is in BOTH.
	CDR	There's the coast of Africa.
	CMP	I'd like to see something ...
	CDR	Oh, you'll see it.
	LMP	Okay - -
	CMP	Get caught up, we'll ... - -
	LMP	- - Get this other one over here.
	CMP	(Laughter)
	LMP	Get this - get this other one over here.
	CDR	Oh, I got it. ... pull that.
	LMP	And then you get a couple of bungees out of there, and I want to trade cards with you, Ron.

[redacted]

	CMP	Okay.
	CMP	(Singing) Okay; 25 and added a 46, 71. A couple of bungees coming up. No, wait a minute, I don't know where they are. Normal ... (Chuckle)
	CDR	That GDC ALIGN pushbutton is really hard to push, Ron. There is a little step in it you got to ... - -
	CMP	Oh, it is?
	CDR	Yes.
	CMP	...
	CDR	Okay.
00 00 40 49	CDR	Give me a battery relay bus reading when you turn the ... on.
	CMP	... 5 Bravo, do you?
	LMP	Yes.
	CDR	Are you sure of the optics ...
	CMP	Yes.
	CDR	Okay. ...
00 00 41 00	CMP	Five Bravo is about 3.45.
	CDR	Beautiful.
	CMP	Yes, that's good, isn't it? Man, the Sun's shining right in those optics. Don't look in them. I won't.
	LMP	Okay. Let's see - and you're happy with the radiator. Looks like it's starting to flow in ... - -
	CMP	Think the ... - -
	LMP	Just ... on the ECS, Gene, okay?
	CDR	No, I just - -
	LMP	Have you done any of it?

[redacted]

	CDR	No.
	CMP	..., Jack.
	CDR	It's all yours.
	LMP	What's that for?
	CMP	... just stick one on a snap or something over there.
	LMP	Okay.
00 00 41 28	CDR	Okay, Ron - Well, Jack can pick up - he can pick these things up, so we don't miss any of them. And you can start getting some cameras out.
	CMP	Okay.
	LMP	Okay, cabin DELTA-P.
	CMP	I going to try to keep the optics stowed, I think, unless I'm using them.
	LMP	Cabin pressure ...
	CDR	Make sure your eye pieces are on nice and tight, too.
	CMP	Yes, I just tightened them on. Oh, yes, that's what they call Sun shafting.
	CDR	Okay.
	CMP	Looks just like the simulator (laughter) (singing).
	LMP	50 ... - -
	CMP	There, that's ... eyes right in the old gazoo. Well, let me adjust those later. (Clears throat)
	LMP	Okay, REPRESS PACKAGE.
00 00 42 38	LMP	PRIMARY RAD talkback - gray.
	CMP	(Singing)
	LMP	... Beautiful. ...

[redacted]

	CMP	Ha, hoo. SXT ...
	CDR	Okay, Ron, the next thing I'll need from you when you get squared away is your TLI cards. Then I'll give you the launch card.
	CMP	Okay. (Singing) ... T isn't getting ... cover.
	CMP	Hmm, huh (singing).
	CDR	Jack, the surge tank there may have hit partly off. It may have ... - -
	LMP	Yes, it - it looks a little low, Gene. I was ...
00 00 43 45	CDR	Okay. It's back on.
	LMP	Okay.
	CDR	It's back on. It may have been partially off.
	LMP	All right. Thank you. I was assuming that was that bias we had, but that's - that did it - that's coming up.
	CDR	Okay, good. It was partially off. I hit it with my arm - -
	LMP	Okay. Thank you. ... - -
	CDR	- - ... checking ... - -
	LMP	- - ... I won't assume biases any more.
	CDR	Okay. You know, I must have caught it with my -
	LMP	Remind me to check that again, if I don't - -
	CDR	Okay.
	LMP	- - remember it.
	CDR	That's why I'm walking around the cockpit, to make sure we got it all.
	LMP	Okay.
	CMP	...

[redacted]

	CDR	Is this yours, Ron?
	CMP	Yes. Okay, let's put a - says a nominal and a manual TLI - 0. That's the first thing that comes up.
	CDR	Okay.
	CMP	Okay, and then we will put TLI-1.
	LMP	Okay. I did it again. It is switching on panel 2. I'm sure of it, almost, now.
	CMP	... boost?
	LMP	It does it in CSM normal position. Well, it did - it did it in boost, too. Did it in boost, too.
	CDR	Okay. We got the nominal TLI-0 up here.
00 00 44 53	CMP	Okay. You want a nominal - Let's see, what do I want to do? S-IVB TLI-1?
	CDR	Yes. You've given me four cards. I don't know - -
	CMP	Well, here; why don't I keep them in my pocket until we - -
	CDR	Well, wait until we pass TLI-0 - -
	CMP	- - ... TLI-0.
	CDR	I got the TLI-0s here.
	CMP	I'll keep those in here.
	CDR	We are coming out over the Indian Ocean. I can't really tell you where, guys, but -
	CMP	Hoo! I wonder if I could take a leak? Do I have time to take a leak?
	CDR	I am going to have to empty my leak when I get out of my suit.
	CMP	Well, I can't do that right now (laughter).
00 00 45 36	CMP	Let's see here. We got to get a camera out, huh?

[redacted]

CDR Yes, get you cameras, that's the next thing.

LMP You need two of them - the 16 and the - You want some words on what - what to put on them?

CDR Why don't you press on - -

CMP Not yet.

CDR - - and I can work with him on that.

LMP Okay. Gene, you got that and that done.

CMP Let's see, what's holding this thing in down there, Gene?

CDR Probably these - these things right here. Is that holding it? Here, let me - let me pull it. Won't it just snap out?

CMP Wait a minute. Here's the snap over there.

CDR Okay, there's a snap down here. There you go. How you guys doing? Moving slow?

LMP Yes.

CMP Yes.

LMP I feel pretty good. I noted that - -

CMP I got a little bit of a - I - I know that if I move fast - -

CDR Okay, well, just - -

CMP - - I'd start to get a headache is all I can say.

CDR Okay. Stay where you are and move slow.

CMP I been - I been floating around too fast down here ...

CDR I think you may have, Ron. You been bouncing around. Just take it easy and go slow. We're way ahead. We're way ahead. And if you feel like you want to get back in the couch, just get back in the couch.

[redacted]

	LMP	Okay, gang, I'm going to give you a - Well, I'm going to save that - until I get unzipped here a little bit. You got your GDC aligned?
	CDR	GDC is aligned.
	LMP	We're getting the cameras.
	CDR	Cabin pressure looks good to you, huh?
	LMP	Yes, sir; it's holding at 6.
	CDR	You got all the hatch configurations we want?
	LMP	Yes, sir.
	CDR	Okay.
	LMP	Very tight. Hatch is good.
	CDR	Neutral - neutral and latch.
	LMP	Yes, sir.
00 00 47 03	CDR	Okay. And I'm double checked here on normal - normal and latched.
	CMP	You want to give me a mark on 48 there, Gene.
	CDR	Yes, I guess, ... 45 seconds. I wonder how that clock got off down there.
	LMP	Okay. You should have Carnarvon in about 5 minutes.
	CDR	Thirty seconds, Ron.
	CMP	Okay. ...
	CMP	36, 37 -
	CMP/CDR	38, 39, 40.
	CMP	Okay, the EVENT TIMER's all right. I'll start on the ...
	LMP	Boy, that pressure comes up fast.
	CDR	On what?

[redacted]

	LMP	On the secondary loop.
00 00 48 02	CDR	There it went - with that switch.
	LMP	Sure seems to be it, doesn't it?
	CDR	Which one - which - any of the switches.
	LMP	Well, so far it's at random. I - Maybe we ought to keep a list.
	CMP	Was that the - I just hit the MISSION TIMER START.
	CDR	No, that was - -
	LMP	No, I think it was mine, Ron; a bat swith up there.
	CMP	Well, so far. I hope it's going in the bag.
	CDR	You hope what?
	CMP	I hope it's going in the bag.
00 00 48 32	LMP	Okay. You got all the optic stuff; right, Ron?
	CMP	Um-hmm.
	LMP	I'll check that one off. You getting the cameras?
	CDR	He's working on it now.
	CDR	Okay.
	LMP	P52?
	CMP	P52 is completed. Torquing angles were small.
	LMP	Did you copy them?
	CMP/CDR	Yes.
	LMP	Okay. SCS attitude - Can you do that?
	CDR	Yes, I can do the SCS attitude. That's no problem.
	LMP	Okay. How about the docking probe? Is that in A - is that in AOS? They like to have that done ... - -

[redacted]

CDR Yes, we'll wait until Ron gets back up here.

LMP Do they like that in AOS, or what'd we decide?

CMP No, they don't - -

CDR They don't need it.

CMP Well, they can't see anything anyway. They got their probe temperature whether it's extended or -

CDR It's just like ... maneuvers I was doing in the T-38.

CMP (Laughter)

CDR If your oil pressure doesn't drop.

00 00 49 33 LMP Okay, you guys. Except for - except for one check over here, which I am going to have to unzip here to do, I think -

CDR I gave you your ..., right?

LMP Yes.

CDR You happy with everything except the MASTER ALARMs?

LMP The MASTER ALARMs ... Whew!

CDR What was it?

LMP Oh, I got that change in the bias again on that H_2 tank. It's down to 90 percent. And surge tank's coming up, thanks to your little check. And MASTER ALARMs are the only thing that I found anomalous. Okay. ...

LMP It's like zero-g.

CMP Yes.

LMP Like man.

CDR Just - just move slow if it - Even if there's nothing bothering, you still move slow.

[redacted]

	CMP	(Singing) It's a lot easier to get out (laughter). You just take it and float it up here.
00 00 50 44	LMP	Okay, let me tell you what you want.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03404

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MILA DURING EARTH ORBIT

Time Segments (AET)

From	To
00 00 02 26	00 00 08 43

Comm fair to good

SECURITY CLASSIFICATION

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[redacted]

00 00 02 26	CDR	Okay; it's 19. Now it's 41 - 41. 3-1/2 g. Hold on. Okay. Five seconds. Pushing 4 g - 4 g. It's starting to hold on. Look at that son-of-a-gun! Man, this is ... (Laughter)
00 00 02 49	LMP	Okay, Bob. I guess we got all five (Laughter).
	CC	They're looking here - looking good.
	CDR	Okay; stand by to tower.
	LMP	Sure felt like it. Stand by. Hold it. I think we saw them all from here.
	CC	Roger, Jack. And the thrust is GO on all five of them. They're running good.
00 00 03 02	CDR	Okay; 3 minutes and we're GO.
	CC	Roger, 17.
	LMP	Say, this is smooth.
	CDR	Okay. I've got the tower switches on ... , baby.
	CDR	GO. Okay; 13. There she goes!
00 00 03 15	LMP	Okay. We do have skirt sep.
00 00 03 18	CC	We confirm skirt sep.
00 00 03 21	CDR	19, 16, 17, 18, 15, 13. Watch it Jack. There goes the tower!
	MS	There goes the tower! There she goes!
00 00 03 24	CC	The tower. You're Mode II.
	CDR	Roger. Mode II.
	LMP	And the steam pressure is taken care of.
00 00 03 33	CDR	Okay; MAN ATTITUDE is RATE COMMAND. Okay; I'll put the - -
00 00 03 37	CC	The steering has converged. The CMC is GO. You're going right down the pike, 17.

[redacted]

00 00 03 39	CDR	Okay, Bob. I just confirmed guidance.
	LMP	And the ELS SEP circuit breakers when you get a chance to, Gene.
00 00 03 45	CDR	Okay, Bob. I got the ELS SEP circuit breakers, and we've seen it all: ignition, staging, and tower.
	CC	Roger. Got you.
	CDR	By the way, the cabin's sealed (laughter). You guys, we've got a long way to go.
	LMP	Okay; ... I'll see what in heck went wrong here. Let's see.
00 00 04 03	CDR	Okay; 4 minutes and we're GO here, Bob.
00 00 04 06	CC	Roger, Gene. We're going round the room. Looks GO here.
00 00 04 08	CDR	Twenty-one degrees. We're Mode II, Ron.
	CMP	Okay; Mode II.
	CC	You're looking real good, Gene. Right down the line.
	CDR	Okay; it - it looks pretty good. Let me get a freeze here on the 04:30. I can barely see that. Let's see.
00 00 04 29	CDR	Okay; 04:30, and we're still GO on board.
	CC	Roger, 17. You're GO.
	CDR	Let me tell you, this night launch is something to behold.
	LMP	Okay; H and H DOT are good.
	CDR	Okay; I don't know if you'll be able to pick up any horizon.
	LMP	Well, it's too dark - too light in here.

[redacted]

	CDR	Okay; let's keep on 1 g. I got some stars out the right, but I don't see - -
00 00 05 04	CC	Five minutes, Geno, and you're GO down here. You're looking great.
	CDR	What's that? Okay. Okay, Robert. We're go here at 5.
	CMP	Coming up on S-IVB to COI.
	CDR	You guys believe me about that S-I staging now?
	LMP	(Laughter) I can't believe how smooth! I can't believe how smooth - -
	CDR	Okay. Let's keep this burn. We got a long way to go. We're only halfway there.
00 00 05 26	CC	17, Houston. Your times are nominal. Level sense arm at 8 plus 36. S-II shutdown at 9 plus 20. Nominal times -
	CDR	8 plus 36 and 9 plus 20. Roger.
	CMP	Coming up on gimbal motors, Geno.
	CDR	Okay.
	CDR	I forget anything yet, Ron?
	CMP	No.
	CDR	Okay. We're still Mode II. Coming up - -
00 00 06 00	CC	Stand by for S-IVB to COI capability.
	CC	MARK. S-IVB to COI capability.
00 00 06 02	CDR	Roger. S-IVB to COI. We're GO at 6. Okay; gimbal motors?
	CC	Roger, Geno.

[redacted]

	CMP	Go ahead.
	CDR	PITCH 1.
00 00 06 08	CMP	Got it.
	CDR	And YAW 1.
00 00 06 10	CMP	Got it. Go ahead.
	CDR	Okay. Wait a minute. I'm checking. PITCH 2.
00 00 06 17	CMP	Got it.
	CDR	And YAW 2.
00 00 06 19	CMP	Got it. Okay; you got a minus 0.58 and a plus 19.
00 00 06 22	CDR	Okay, Bob. We got four good motors, and we're GO at 06:20.
	CC	Roger. And, 17, we - -
	CMP	1 g. Just like sitting on the pad, isn't it? ...
	LMP	Okay; our calibration on that tank changed a little bit again, apparently.
	CMP	Okay.
	LMP	Down to 90 percent.
	CMP	Right. Oh, on the tank 2?
	LMP	No, on the hydrogen.
	CMP	Hydrogen tank 3.
	CC	Stand by for S-IVB to orbit capability.
	CDR	Roger, Bob.
00 00 06 51	CC	MARK. S-IV to orbit capability. And we'd like OMNI Delta, Jack.

[redacted]

	LMP	Roger. You've got it.
	CMP	Okay; 7 minutes, ... degrees.
	CDR	Seven ... , 6 degrees. How does that sound?
	CMP	Okay; that's good. That's 723. Let's see, 119 - -
	CDR	We go to ...
	CMP	We're half a mile, half mile high.
00 00 07 08	CDR	Seven minutes, Bob. We're looking good on board.
	CDR	Am I glad I took my hand off that abort handle.
	CMP	(Laughter) Man!
	LMP	So am I - I'll tell you (laughter).
	CDR	Okay; we got to get through this one and then through staging. Stand by for inboard. Okay.
	CMP	Tank pressure is - -
	CDR	Stand by for inboard.
	CMP	Okay.
	CDR	Okay; we're g and a half. Stand by.
00 00 07 41	CDR	We have inboard cut-off.
	CC	Roger, Gene. Inboard on time.
	CDR	Okay; and she pitches up just like the simulator.
	CMP	Yes, sure does.
	LMP	Uh-huh.
	CMP	Is that hard to reach, Jack?
	LMP	Yes. Why don't you take it out. I can't quite - g and a half (laughter).

[redacted]

	CMP	Yes (laughter).
00 00 08 03	CDR	Eight minutes, and we are GO.
	CC	Roger, 17. You're looking great.
	CDR	Okay. Everything's okay.
	SC	... are really - -
	CDR	Stand by for a PU shift.
	CMP	Is that what that was?
	CDR	Yes, I think it was.
	CMP	Yes, I think that was it.
	CDR	Okay, Ron. Level sense arm will be at 36.
	CMP	Thirty-six. Okay.
00 00 08 22	CC	17, Houston. You are GO for staging.
00 00 08 28	CDR	Thank you, Bob. We are GO for staging up here.
00 00 08 43	CDR	Level sense arm ...

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03409

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER BDA DURING EARTH ORBIT

Time Segments (AET)

From	To
00 00 05 48	00 00 10 49

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

00 00 05 48	CDR	Are we getting anything yet, Ron?
	CMP	No.
	CDR	Okay. We're still Mode II. Coming up - -
	CC	... by for S-IVB to COI capability. S-IVB to COI capability.
00 00 06 00	CDR	Roger. S-IVB to COI. We're GO at 6. Okay. ... gimbal motors?
	CMP	Go ahead.
	CC	..., Geno.
	CDR	PITCH 1.
	CMP	Got it.
	CDR	And YAW 1.
	CMP	Got it. Go ahead.
	CDR	Okay. Wait a minute. Let me check it. PITCH 2.
	CMP	Got it.
	CDR	And YAW 2.
	CMP	Got it.
	CDR	Okay. You got a minus 0.58 and a plus 1.9.
	CMP	That's affirm.
00 00 06 20	CDR	Okay, Bob. We got four good motors, and we're GO at 06:20.
	CC	***ger. And, 17, we - -
	CMP	One g? (Laughter) Just like sitting on the pad, isn't it? That's all there is to her.
	LMP	Okay. Our calibration on that tank changed a little bit again, apparently.

[redacted]

	CDR	Okay.
	LMP	Down to about 9 - 90 percent.
	CMP	90? Oh, on the tank 2?
	LMP	No, on the hydrogen tank.
	CDR	Hydrogen tank 3, then.
	CC	... by for S-IVB to orbit capability.
00 00 06 48	CMP	Roger, Bob. S-IVB to orbit.
	CC	... S-IVB to orbit capability. We'd like OMNI Delta, Jack.
	LMP	Roger - -
	CDR	Okay; 7 minutes, 6 degrees. Yes - -
00 00 06 56	LMP	- - You've got it.
	CDR	- - 7, and I'm 6 degrees. How does that sound?
	CMP	Okay. That's good. 723 - let's see, 119.
	CDR	We got altitude. We're going to start - -
	CMP	... We're at half a mile, half a mile high.
00 00 07 07	CDR	Seven minutes, Bob. We're looking good on board.
	SC	(Cough)
	CC	Roger.
	CDR	Am I glad I took my hand off that abort handle.
	CMP	(Laughter) Man! So am I. (Cough) I'll tell you (laughter).
	CDR	Okay. We got to get through this one and then through staging. Stand by for inboard.
00 00 07 29	CMP	Okay. Inboard at 07:41 - -

[redacted]

	CDR	Tank pressures .... good.
	CMP	Stand by for inboards.
	CDR	Okay.
	CMP	Okay. We're a g and 1/2. Stand by.
00 00 07 40	CDR	We have inboard cut-off.
	CC	Roger, Gene. Inboard on time.
	CDR	Okay. And she pitches up just like the simulator.
	CMP	Yes. Sure does, doesn't she?
	LMP	Oh!
	CMP	Is that hard to reach, Jack?
	LMP	Yes. Watch it there. I don't know if you can quite - g and 1/2. (Laughter)
	CMP	(Laughter) Yes, it is.
00 00 08 00	CDR	Eight minutes, and we are GO.
	CC	Roger, 17. You're looking great.
	CDR	Okay. Everything's okay.
	CMP	Gosh, these ... are really good.
	LMP	Yes.
	CDR	Let's stand by for a PU shift.
	CMP	Is that what that was?
	CDR	Yes, I think it was.
	CMP	Yes, I think that was it.
	CDR	Okay, Ron. Level sense arm will be at 36.
	CMP	36, okay.

[redacted]

00 00 08 20	CC	17, Houston. You are GO for staging.
	CDR	Thank you, Bob. We are GO for staging up here.
	SC	(Cough)
	CMP	Little over a g.
	CDR	Yes, there's a little chug.
	CMP	Yes.
	CDR	Okay. We got to get through this one. Coming in. We're in level sense arm now.
00 00 08 39	CC	You have level sense arm this time, Gene.
	CDR	Roger, Bob. Level sense arm. Okay, Ron. Our next thing will be stand by for Mode IV, and we'll have staging - I'll call it out to you. And, little S-IVB; burn, baby, burn.
	CMP	... on the S-II.
00 00 08 59	CDR	Nine minutes, Bob, and 17 is GO.
00 00 09 03	CC	..., 17. You're GO here.
	CDR	Okay. Stand by; 10 seconds.
	CC	... Mode IV capability -
00 00 09 16	CC	MARK. Mode IV capability, and we copy cut-off.
	CDR	Roger. Mode IV. And we do have S-IVB ignition.
	CC	We see it, and the thrust is looking good on it.
	CMP	Jack, did you see that glow - -
	LMP	Gee!
	CMP	- - go - go in past us?
	CDR	We saw that one, too, Bob.

[redacted]

	CMP	Did you see it go past us?
	CC	Roger.
	LMP	Yes. We're right in the flame.
	CDR	Yes, that's what the Titan used to do, used to fly through the flame of that thing. Let's - let's press on here. We got - -
	LMP	Okay. Okay.
	CDR	- - a lot to do. We're Mode IV?
	LMP	Yes.
	CDR	Okay. We're at a little less than a 1/2 g.
	LMP	Less than 1/2 g, sir.
	CMP	Coming up on - -
00 00 09 51	CDR	Okay. 10 minutes, Ron, I'll be at about 40 - -
00 00 09 54	CC	17, the steering has converged, and the CMC is GO. You're looking great.
	LMP	- - ... at 13 ...
00 00 09 58	CDR	Roger. The CMC is GO; 10 minutes, and 17 is GO on board.
	CMP	Okay; starts a little bit low, but not bad.
00 00 10 06	CC	17, Houston. You are GO for orbit. GO for orbit.
00 00 10 10	CDR	Those are kind words, Robert. We're GO for orbit here.
	CC	... show, Gene.
	CDR	Okay; coming up on 30, Ron. Let's - -
	CMP	Okay.
	CDR	- - doublecheck everything.

[redacted]

	CMP	30, 347 degrees. 23.9; Okay. We're a little bit high.
	LMP	I couldn't see a star if I had to right now.
	CMP	I couldn't either. Velocity is a little high.
00 00 10 32	CDR	Okay; 10:30, and we're GO.
	CMP	H-dot's a little high. Little bit low.
	CC	Roger, 17. You're looking great.
	CDR	Okay, the cut-off is VI plus 100. ... copy ... - -
	CMP	VI plus 100. Okay, I'll cut you out.
00 00 10 49	CDR	I just want to hit the ... that's all there is to it.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03407

APOLLO 17 MISSION
APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER TEX DURING EARTH ORBIT

Time Segments (AET)

From	To
00 00 00 03	00 00 04 54
00 00 59 51	00 01 17 34
00 01 22 38	00 01 27 49

Voice good; Time for first segment extrapolated from air-to-ground.

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[redacted]

00 00 00 03	CDR	Roger. The clock has started. We have you. (Laughter) Clear the tower. Roger; tower. Yaw's complete. We're into roll, Bob.
00 00 00 17	CC	..., Geno. Looking great. Thrust good on all five engines.
00 00 00 20	CDR	Okay, babe. It's looking good here; roll is complete. We are pitching.
	SC	Wow woozle!
	CMP	Okay, babe. Let's check the angles.
	CMP	Thirty seconds. We're going up. Man, oh, man!
00 00 00 36	CDR	Thirty seconds, and 17 is GO.
00 00 00 38	CC	..., 17, you're GO.
00 00 00 45	CMP	Okay, 1 minute, 68 degrees.
	CDR	Okay.
	LMP	Everything looks great over here, Gene.
	CDR	Okay. Okay, stand by for ... we're coming through for ... We'll be up ...
	CMP	... looking for.
	CDR	Okay.
	CC	17, stand by for Mode I Bravo -
00 00 01 01	CC	MARK. Mode I Bravo.
00 00 01 04	CDR	Roger. I Bravo; we're GO at 1 minute.
	CC	17, you're looking great. Right on the line.
	CDR	Okay, we've got the RCS command.
00 00 01 11	CC	Gene, you are feet wet - feet wet.
00 00 01 13	CDR	Roger. Feet wet.

[redacted]

	CMP	Hey, this thing shakes like a ...
	CDR	Yes, that's max q, wait until we get out of max q; stay down there, q ...
	CMP	Okay.
	CMP	01:30, about 50 degrees.
	CDR	50 degrees. Okay, right on.
00 00 01 34	CDR	01:30, and we are GO, Bob.
	CC	Roger, Gene. You're looking great.
	CDR	... 2 g, 2-1/2 g. See, it quiets down after max q.
	CMP	Yes, quiets down.
	CDR	Pushing 3 gs.
	CMP	Okay, I can't hold my hand up there any more (laughter).
	CDR	Yes. Okay, we're out of max q.
	CMP	Okay.
	LMP	Cabin's still looking good. ... PC.
	CDR	Okay, stand by for - -
	CC	Stand by for Mode I Charlie, 17.
	CDR	- - I Charlie - -
	CC	Mode I Charlie.
00 00 02 00	CDR	Roger. I Charlie; 2 minutes and EDS is OFF and we are GO.
00 00 02 06	CC	17, you're GO.
	CMP	... does pull a couple of g's.
	CDR	Three g's; 3-1/2. Stand by for inboard.

[redacted]

00 00 02 11	CC	17, you are GO for staging.
	CDR	Roger. We are GO here. Did you get your VERB 82?
	CMP	No.
	CDR	Stand by for inboard.
	CMP	Okay, that's VERB 82.
	LMP	Yes.
00 00 02 22	CDR	Inboard cutoff.
	CC	Stand by.
	CDR	Okay, now hold on to that staging.
	LMP	Stand by, gang.
	CDR	Okay.
	CMP	Here's 20, where's the ...?
	CDR	Okay, it's 19.
	CDR	Now at 41.
	CMP	41, okay.
	CDR	3-1/2 g's. Hold on.
	CMP	Okay.
	CDR	Five seconds. Pushing 4 g's.
	CMP	4 g's.
	CDR	Told you to hold on. Look at that son of a gun.
	CMP	Man. ... criminy (laughter).
00 00 02 49	CDR	Okay, Bob. I guess we got all five.
	CC	Looking good here - looking good.

[redacted]

	CMP	Okay, stand by to ...
	CDR	Sure felt like it. Stand by; hold it.
	LMP	I think we saw them all from here.
	CC	Jack, the thrust is GO on all five of them. They're running good.
00 00 03 02	CDR	Okay; 3 minutes and we're GO.
	CC	Roger, 17.
	CMP	Hey, this is smooth.
	LMP	Okay. I got the tower switches ...
	CDR	Come on, baby. Go.
	CMP	Okay, 15. There she goes.
	CDR	Okay. We do have skirt sep.
	LMP	19, 16, 17, 18 - -
00 00 03 18	CC	We confirm skirt sep.
	CDR	Watch it, Jack.
00 00 03 24	CC	... tower; you're in Mode II.
	CDR	Roger. Mode II.
	CDR	Okay, ATTITUDE ... RATE COMMAND.
	CMP	Okay, ...
	CC	... has converged. The CMC is GO. You're going right down the pike, 17.
	CDR	Okay, Bob, I do confirm guidance.
	CMP	And ELS sep circuit breakers, when you get a chance there, Gene.

[redacted]

	CDR	Okay, Bob. I got the ELS sep circuit breaker. And we've seen it all: ignition, staging, and tower.
	CC	Got you.
	LMP	By the way, the cabin sealed.
	CDR/LMP	(Laughter)
	CDR	Okay, guys. We got a long way to go.
	LMP	Okay. I'll see where we're ... here.
00 00 04 03	CDR	Okay; 4 minutes and we're GO here, Bob.
	CC	Roger, Gene. We're going around the room. Looks GO here.
	CDR	21 degrees; we're Mode II, Ron.
	CMP	Okay.
	CC	... right down the line.
	CDR	Okay. It's a - it looks pretty good.
	CMP	We get a freeze here on the 04:30.
	CMP	I can't - barely see that, let's see.
00 00 04 29	CDR	Okay; 04:30 and we're still GO on board.
	CC	Okay, 17. You're GO.
	CDR	Let me tell you, this night launch is something to behold.
	LMP	Okay. H and H-dot are good.
00 00 04 54	CDR	... Pick up ...

TIME SKIP

[redacted]

00 00 59 51	SC	Well, I'll tell you ...
00 01 00 05	CDR	Okay, 11, 6 ...
	CMP	(Laughter)
	CDR	... pretty stingy with the tape there ... piece about a foot long.
	CMP	A foot long?
	CDR	Oh, this'll do for now. I'm just going to put this here, if you've got any other things ...
	CMP	Man, are we moving. Holy mackerel.
00 01 00 33	CDR	Don't let it out, Ron.
	CMP	I haven't had a chance to look out the window yet.
	CDR	That's all right, get back to work.
	CMP	(Laughter)
	CDR	Here it is.
	LMP	That was as hard as ...
	CMP	Oh, it didn't hit it.
	SC	No.
	CDR	I hope that doesn't mean anything, but it sure could be a pain in the neck, even if it doesn't.
	CMP	... he was doing isn't very loud, is it?
	CDR	No. (Humming)
	LMP	It's just a big lake region.
	CDR	... what's that with trees and grass?
	SC	...
	LMP	... map out and ... look at it.

[redacted]

CDR You got ...?

LMP Got the weather map.

CDR Okay, we got the SPS ref check to do yet?

LMP Sure.

CMP Yes, I ... it. (Laughter)

CDR No, we're not - we're not doing a darn thing up here ... spacecraft.

CMP Oh, really?

CDR We're way up here ...

CMP There it is.

CDR And we're moving north there.

CMP Oh, look at the coral reef there, Geno.

CDR Yes.

CMP Look at it; that's coral.

CMP Too bad the Bahamas - well, you'll see the Bahamas in daylight, as far away as the Moon, but they really get bright.

LMP ... over in ...

CMP Fantastic! Coral atolls.

LMP I wonder what that ... looks like from the ground.

CMP Oh, boy, I wish I'd put my - -

CDR Okay, troops, let me get you back and squared away here, I mean checklistwise.

CMP ... reference setting ... computer.

CDR I will, I will.

LMP Yes, I'll get that.

[redacted]

00 01 03 20	CMP	VERB 16, NOUN 20.
	CDR	I got it.
	CMP	Select number 1, FDAI.
	LMP	Okay, got it.
	CMP	FDAI SOURCE to ATTITUDE SET.
	LMP	Yes.
	CMP	ATTITUDE SET, GDC.
	LMP	Yo.
	CMP	Attitude set dials, null number 1 error ...
	LMP	Okay.
	CMP	Then key your verb when they're nulled.
	CDR	Okay. Do we call up ...?
	CMP	Oh-ho-ho.
	LMP	One, we've about 15 minutes of sunset, Gene. Okay, 8 minutes earlier, no - got less than that - 8 minutes earlier - -
	CDR	Okay, here's the numbers, Ron, if you want to write it down.
	CMP	Okay. Wait just a second. Un poquito.
	CMP	Okay.
	CDR	What do you want, NOUN 20 first?
	CMP	... yes, NOUN 20.
	CDR	179.77.
	CMP	179.77.
	CDR	118.95.

[redacted]

	CMP	118.95.
	CDR	359.59.
	CMP	359.59.
	CDR	Okay, next will be 180.3.
	CMP	180.3.
	CDR	119.75.
	CMP	Okay. Okay.
	CDR	Then 359 ... .0.
	CMP	Degree of pitch, got that?
	CDR	Okay, that'll be 114-1/2 and 115 - about - about a degree.
	CMP	...
	LMP	Got 8 minutes to Hawaii AOS.
00 01 05 42	CDR	Would you believe the GDC drifts just like it does - -
	CMP	Like it does in the simulator?
	CDR	Can't believe it does that.
	CMP	(Laughter) It's not supposed to do that.
	CDR	Well, I discovered one thing, I'm ... looking at the time on the checklist that the tape ...
	CMP	...
	LMP	... I will have a drink of water, though.
	CMP	That's good water now - good water now.
	LMP	Aren't we supposed to use our little thing?
	CMP	I don't know. We're not - not keeping track of it now, so I figure we'll start tomorrow.

[redacted]

	CDR	You don't have one of those ...
	CMP	... yet. I don't know, are those going to be big enough? Got some other kind somewhere, but I ... find ...
	CDR	Well - -
	CMP	... will. ... floating up to the top of the tunnel ...
	CDR	... great, huh?
	SC	... feel ...?
	SC	Yes.
00 01 07 25	LMP	Okay, sports fans. You want to extend the docking probe or do you want to wait?
	CMP	Whoo, I think I might as well do that.
	CDR	Try to extend the docking probe. (Humming)
	CDR	Are you - are you passing out our stowage ET bags?
	LMP	No, not yet. I better get some, hadn't I?
	CMP	You need some for TLI?
	LMP	No, I just thought you'd need some to ...
	CMP	Oh, okay.
	CMP	I got to figure out where to put them.
	CDR	You want - you want me to read you the checklist?
	LMP	Let's see. You guys finished your redundant performance check, didn't you?
	CDR	Except for the ... with the clouds, with the Sun putting shadows on the surface out there.
	CMP	Hey, we're pretty close down there, you know.

[redacted]

	CDR	Yes, we're getting close to sunset - -
	CMP	Oh, there comes the sunset. Whoo!
	CDR	Man, that's - what did I say? Did you ever see the shadow up on those clouds?
	CMP	Yes.
	CDR	Good grief.
	CMP	What is the - what are those bright spots in the clouds there? What are those?
	LMP	Oh, that's your spot - that is the - -
	CDR	That's the cloud in the shadow, see, the shadow's gone a long way.
	LMP	That's at high cg [?]. That's 6 cg - -
	CMP	Oh, that's 6 cg.
	LMP	In fact, it's a little low-pressure area, see it?
	CMP	Yes.
	CDR	Looking at everything upside down.
	LMP	Why don't you get our retro orbit chart out when you go into the data file, Ron.
	CMP	Okay.
	CDR	... might take the Flight Plan out.
00 01 08 56	LMP	There are some pretty lively looking clouds down there.
	CMP	Yes. Yes, yes.
	LMP	Better than ...
	CMP	Are we going right around the equator, must be.
	CDR	Yes, we're - we're northwest of Samoa.

[redacted]

CMP ... we went on a 91 degree ...

LMP There's a good-looking cloud for you; look at that one.

CMP Yes.

LMP Boy, you could snap a picture of that. (Chuckle) I forget I got the darn camera.

LMP ... be underexposed.

CDR I can get that, Jack; give me that.

LMP I got it.

CDR ..., Okay.

LMP There's some big clouds - -

CDR That little round one, you mean?

LMP Yes.

CDR Yes, there's another one - yes.

LMP ... up in here.

CDR And there's another one over here on my side, if you'll give me the camera.

LMP Okay, it's at 5.6; might want to open it up more.

CDR I don't know - I don't know if I can get it now, it's going to be hit and miss.

LMP That's the ...

CDR Well, I guess it is.

LMP How about out your window, Ron?

CMP I can see it, but - -

CDR No, it's too late - -

[redacted]

	CMP	Too late now; I'm in the dark.
	LMP	Okay, it looks like - something ... pad.
	CMP	Okay, how about the old docking probe - -
	LMP	Hand me the camera and I'll put the ...
	CMP	- - docking probe circuit breakers.
	CDR	Okay, you got - circuit breakers are IN.
	LMP	Okay, let's go by this checklist and make sure ...
00 01 10 20	CMP	DOCKING PROBE circuit breakers, two, CLOSED.
	LMP	They're CLOSED.
	CMP	Okay.
	CMP	DOCKING PROBE, EXTEND/RELEASE; EXTEND/RELEASE until probe extension. Okay, I'm going to hit it real lightly. ... barber pole and gray. I hear a - I thought it went bump, didn't it?
	LMP	I couldn't tell.
	CDR	That was me with the camera.
00 01 10 40	CMP	... go to EXTEND. It's out. Okay. Do that. Go to RETRACT. Go gray?
	LMP	They both popped in a hurry, didn't they?
	CMP	Yes, that really goes great. Okay, probe return.
	LMP	How did it go again?
	CMP	RETURN and RETRACT is gray. Okay, DOCKING PROBE EXTEND/RELEASE. I don't know whether - okay, RETRACT. Okay, we'll keep it in RETRACT until TLI. Copy TLI abort pads.
	CDR	We got everything on the checklist?

[redacted]

	CMP	CEX at the moment ..., I mean, 1/250.
	CMP	(Humming)
	LMP	Better keep trying to hold things up, so ... won't ... one g ...
	CMP	Okay, we got - we got everything on that checklist, ...?
	LMP	Okay, I'm going to go back through it, then.
	CMP	I think we're in good shape.
	CDR	And Hawaii is what, 01:17?
	LMP	Yes.
	LMP	You got the docking probe set?
	CMP	Yes, that's ...
	LMP	Hawaii is at - 01:17:24, and we leave it at 22:49 ... 54.
00 01 12 42	LMP	Let's see - yes, better get back.
	CMP	(Humming)
	LMP	Okay, Geno. Let me go back for you.
	CMP	Oh, that's great ...
	LMP	What is this stuff, commander's splashdown speech? (Laughter)
	CDR	What's that? What?
	CMP	(Laughter)
	LMP	Commander's splashdown - -
	CMP	Commander's splashdown speech ... What's it say? (Laughter)
	LMP	It says, "Commander's splashdown speech" ... decal put on - on the door there with the ...

[redacted]

	CDR	Okay, going backwards, you guys got the SCS attitude reference component check - P52, the optics dust cover, the camera, just about finished the secondary ECS ... Okay, there's the Entry Checklist.
	LMP	The ORDEAL mounted and initialized.
	CMP	Update book - you want to update book ...
	CDR	... want the Flight Plan ...
	LMP	Well, I don't need it right now. All right, I've got everything I need in here. I want to give you ... cards, so tell me when you want them.
	CMP	I just don't know where to put them yet.
	LMP	...
	CMP	... survival kit.
	LMP	Unstow ... camera, got that; GDC is aligned. SPS is checked except for couple of items, which I'll do. ... EPS, fuel cell purging, and the heaters are on.
00 01 14 57	CMP	Maps are hard to get out. Hey, you want a map?
	CDR	Yes. ...
	CMP	Rescue book, don't need that. ... it on 13, you want it on 13?
	LMP	Might as well get it, I guess, while ... here.
	CDR	You got the EPS configuration, main ...? You guys went through that?
	LMP	Yes, ...
	CDR	Okay, ...
	LMP	Got a map ... somewhere.
	CMP	Hey, see what's in there, Gene. I don't know what's in there.

[redacted]

CDR	I hope the - well, it's Systems Data - -
LMP	That's what I hope it is - -
CDR	- - and Flight Plan volume 1 - -
CMP	Okay, that's what it was - -
MS	And malfunctions.
CMP	Good, that's good. Okay.
LMP	Let's see, this looks like a LM thing here.
CDR	What's that? Oh. We don't need that yet.
LMP	SEG ...
CMP	LM transfer.
CDR	Yes. Sure.
LMP	...; look at that.
CDR	Is it in there? ...?
CMP	Is that in the Flight Plan?
CDR	Oh, those son of a guns.
SC	(Laughter)
CDR	... those finks!
CMP	(Laughter)
CDR	Look at those finks!
LMP	What did they do?
CDR	... Everywhere. Look it.
CMP	(Laughter)
CDR	Those finks.

[redacted]

	CDR	Oh, my gosh. That is almost a crime; how can I peel that off?
	CMP	We (laughter) got to peel that off to get to it.
	CMP	Thanks a lot, Gene, stand by.
	CDR	Okay. How could anybody do that? Over Hawaii?
00 01 17 12	LMP	Yes, we're there.
	CMP	Go ahead.
	LMP	..., Gene, never saw that one before it was in there.
	CDR	Journey's lift-off receipt [?]. (Laughter)
00 01 17 25	LMP	Hello, earthlings, we are back with you.
	CC	Roger, Jack. Read you loud and clear; how us?
00 01 17 34	LMP	You're loud and clear, and - ... comm ... change in AOS/LOS stuff.

TIME SKIP

00 01 22 38	CC	Negative on that right now. We'll see you at 01:28:59 through Goldstone.
	CDR	Okay, 01:28:59, Bob. We'll be there.
00 01 22 48	CC	Roger, Gene.
	CDR	Five minutes, we'll be over the states, guys. Let's turn the lights on a little bit.
	CMP	You start to see a glow; there is a glow. See the horizon.
	LMP	You got pretty good eyes.
	CMP	Huh?

[redacted]

LMP Oh, yes, there it is.

LMP Guess what I've lost?

CDR What?

LMP Camera.

CMP (Laughter)

LMP You see a camera floating around anywhere? I got it.

CMP (Laughter)

CDR Ron, - while you're down there, kick my suit up. I want it bagged up.

CMP Here it is.

CDR ...

CMP ...

CDR I thought I had that on.

CMP Here we go.

CDR Okay. ...

CMP Yes, ...

CMP See that glow out there, Gene?

CDR Yes, I see it.

CMP Is that the sunrise?

CDR No, I'm looking out the north horizon ...

LMP That's what they call a - ...

CDR Yes.

LMP Boy, did you see us go through that darn S-IVB fire ...?

[redacted]

	CDR	Yes, let me - -
	LMP	What was it?
	CDR	That was the S-II staging, went through the S-II fireball, because it takes awhile for the S-IVB to light up.
	LMP	Yes, that's what it was.
	CDR	- - on that - on that Titan, between the S-I and the S-II - -
	CMP	Is the tape going? Say, is the tape going, Jack?
	LMP	Yes, sir. How's that?
	CDR	You - you get that because there was a pause and a fireball would overlap you. And you could fly right through the flash smoke and flame wall.
	LMP	Well, that - we sure enough did it, I tell you. It wasn't awfully bright.
00 01 25 19	CDR	We saw - we saw all three stagings, now, or all three ignitions.
	CMP	Yes, yes.
	CDR	I even had the up ... ignition on ... and that power was - -
	CMP	There's the old dipper!
	LMP	That tower was spectacular.
	CDR	Yes, it was ...
	CMP	... (laughter). That tower really - really went.
	CDR	Look at those stars. Gee, Jack, this is right, you get north - you're always on my north - -
	LMP	... stars.
	CDR	- - command module and in the LM. Okay. ...

[redacted]

	LMP	We're looking ...
	CMP	Ought to look at these optics at nighttime, I guess.
	CDR	You got to do another P52, by the way ...
	CMP	I do it now?
	CDR	Well - -
	CMP	...
	CDR	I can't believe that guy - did that to me. Not to ... but to me. ...
	CMP	(Laughter) Okay, AOS.
	CDR	Next P52, Ron, comes about 28. We should be just about 45 - -
	CMP	Hey, there's Orion.
	CDR	- - about 45.
	CMP	... very well, though.
	CDR	... And - the ... are what, Jack?
	LMP	Well, AOS Goldstone - Goldstone are 28.
	CDR	28. We ought to be able to see California in the dark. There's Baja.
	LMP	I don't have a good feeling for where our Flight Plan is right now, does anybody?
00 01 27 06	CDR	Yes, 90-degree launch azimuth means we're on our next latitude. We're coming up on our next latitude, which is Cape ... latitude - the next latitude will be for the Cape.
	LMP	But we're going across here - -
	CDR	A little bit more than the Cape, because it actually was 91-1/2.

[redacted]

	LMP	... we're going across Arizona and that's Baja California, probably.
	CDR	Yes, we're coming up over San Diego; we should be ...
00 01 27 47	LMP	Turn on your lights, San Diego. Boy, it's pretty near over my home, I guess.
00 01 27 49	CDR	Yes.

# # #

[redacted]

(This page Unclassified)

Tape 17-03412

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER HSK DURING TRANSLUNAR COAST

Time Segments (AET)

From	To
01 21 30 19	01 21 33 18
01 21 33 36	01 21 39 39
01 21 40 24	01 21 40 31
01 21 47 48	01 21 49 21
01 21 51 15	01 21 52 45
01 21 54 56	01 22 00 12
01 22 00 22	01 22 03 27
01 22 04 09	01 22 09 27
01 22 09 29	01 22 14 18
01 22 14 31	01 22 19 46
01 22 20 21	01 22 24 36
01 22 24 52	01 22 24 52

Voice good; time very poor.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

[redacted]

01 21 30 19	CMP	Okay. DAC is ON.
	CMP	Okay. Stand by for a zero. 3, 2, 1 -
01 21 30 34	CMP	MARK it. That's RESET. Start the stopwatch.
	CMP	The camera's looking okay?
	CMP	Okay. Will do.
	CMP	Okay. You don't want to watch me fill that pan again, huh? You don't want to watch me fill the pan again.
	CMP	Okay. I'm with you. Actually, I've already cleaned out the - the little area there. Oh, okay.
	CMP	Well, we'll start at 2 minutes.
01 21 33 18	CMP	Well, now all of the little metal chips in there are parallel to the YY axis.

TIME SKIP

01 21 33 36	CMP	They're still on the front face of the lineal cell.
01 21 34 25	CMP	Thank you ...
	SC	Is something bothering you there?
	SC	(Sneeze) ...
	CDR	How many of those do you have, Jack? Three all together?
	CDR	Now, wait a minute. You wore one. You putting on a clean one now? And you got another one in here? Four clean ones altogether? Is that right? Okay.
	CDR	What's happening, Ron.
01 21 39 39	CMP	Well, the cells are changing.

[redacted]

TIME SKIP

01 21 40 24	CDR	Where have you been?
01 21 40 31	CDR	... back together.

TIME SKIP

01 21 47 48	CMP	Okay, Houston. The DAC is OFF now.
	CMP	... Go ahead, Houston.
	CMP	Okay. No problem. Good idea.
01 21 48 58	CMP	Affirmative; okay.
01 21 49 21	CMP	Okay. I opened the flow about four turns, a little bit is running out - there's one big bubble in it. And I still had a little bit left over, even though I wiped it out pretty good awhile ago. The meniscus is up to the bottom ring and I think if we put in eight things in there where it's going to try to get the meniscus up to the top baffle. Is that correct?

TIME SKIP

01 21 51 15	CMP	Well, there must have been a few more bubbles down in there again. That was two turns now, and I've got it about half full all the way across. But maybe there's just about eight or 10 bubbles in it.
	CMP	Okay. I guess we're recording on the DSE here. In case we don't have you, we're still recording on the DSE. That's three turns. The fluid is essentially about two-thirds of the way across it. What?
	CMP	It's running, isn't it? The DSE is running, isn't it?
	CDR	It should be.

[redacted]

01 21 52 45	CMP	It should be, and if you slow it down a little bit. Now it's filled all the way across. Looks like we got about nine bubbles in there, so far. We're still going on the fir - fourth turn now and it still developes a meniscus around the lower baffle - the smaller baffle.

TIME SKIP

01 21 54 56	CMP	Okay. Looks like about six of the bubbles developed into three, for some reason.
	CMP	Oh - oh. It was doing real well there. Then on the seventh turn, a bunch of bubbles came in again.
	CMP	Okay. You want the DAC on when it starts heating up. That's what you're saying, right?
	CMP	Okay. You know - I may have lost track of the turns here, but I think we've got 7-1/2 or 6-1/2 turns in here. And it still hasn't overflown that first lower baffle. I've got a tremendous concave - convex surface on the fluid, but it still hasn't broken the meniscus on the first bas - baffle.
01 21 58 53	CMP	Okay. We're going ahead and take it another turn, because it's my understanding we wanted to try to get it into the second baffle, anyhow. So, we'll take another turn of Krytox and put some more in there.
	CMP	(Laughter) Okay. I'm afraid it will be all over the place if I do that, but I'll try it.
	CMP	(Laughter) Right.
01 22 00 12	CDR	Okay.

TIME SKIP

01 22 00 22	CMP	... try ...
	CDR	Had one somewhere.

[redacted]

	CMP	That was mine.
	SC	Nobody ever ...
	SC	Huh?
	SC	...
	CMP	Ah-ha. Once you get it started around there it really goes all the way around. Okay. We got her in the second baffle. That takes some of the concaveness out of the - convexness out of the film, so I'll go ahead and turn the camera off and then start it again when the time comes.
	CMP	Okay. 3, 2, 1 -
01 22 01 46	CMP	MARK it. That starts.
	CMP	There you go, Jack. If you get the chance, you might want to use the Nikon there and get a picture ...
	SC	Want to hand me the ...
	SC	Want the attitude ...
	CMP	Yes, so kind of get the ...
	SC	...
	CMP	Yes. Switch the background.
01 22 02 57	CMP	This one is going to be interesting. There are about a dozen, nine to a dozen - small bubbles right next to the inject board and then about the same number right in the center of the convex portion of it.
01 22 03 27	CMP	No, I didn't get to your question on that. In the lineal unit there are no bubbles whatsoever. And there might have been very slight movement. Matter of fact, I can see just a very slight movement, even now. The particles in there; they're still lined up in the YY direction essentially though,

[redacted]

although it looks like some of them may have deviated from the front of the lineal unit back toward the center or toward the back of the lineal unit, as you call it.

TIME SKIP

01 22 04 09	CMP	Well, I missed the 2-minute start time, but I can keep track of it here. So, we'll start the DAC, and then I'll turn this to LOW at 02:45.
	CMP	Whoops.
	CMP	Okay.
	CDR	Squat down a little bit and I'll get you -
	CMP	And you still get this thing.
	CDR	Well, when you do you really shake it up.
	CMP	Yes.
	CMP	Okay. You know, just for future references here if we like to do things in zero g and without jarring or jiggling, we want to make sure that the switch actuates with a minimum of pressure.
	LMP	(Laughter) The camera, too, you might mention. I think the camera is jiggling a little ... shutter ...
	CMP	Yes.
	LMP	You want to leave it on?
	CMP	Yes.
01 22 05 36	CMP	You have enough light to get that thing?
	SC	...
	CMP	Should be. I hope.
	SC	...

[redacted]

CMP What frame was that?

LMP ... frame.

CMP Okay. That's just now starting to develop. Looks like circular cells, great big ones. And then some of the big ones are subdividing now.

CMP The bigger ones are even - some of them are even getting bigger. One of them is - oh, about three-quarters of an inch in diameter, and it hasn't divided yet, at all.

CMP What frame was that?

LMP 26 and 27.

CMP Okay. Frame 26 on the - -

CC ...

CMP Okay.

CMP 26.

LMP 26 and 27 ...

CMP Okay. Frame 27 was taken in elapsed time of about 4 minutes.

LMP I just took one of your nose.

CMP (Laughter)

01 22 07 40 LMP Stu, this is Jack. I was taking the pictures. I took four pictures about 20 seconds apart - of the sequence just after he started it. And that ended with - or started with frame 26.

CMP Okay. That one cell I spoke of that was about three-quarters of an inch in diameter now is about an inch long and maybe three-quarters of an inch wide. Each - All of the cells seem to be bigger, in general. They're bigger this time, so two small ones about an eighth of an inch and - along one side. The other one is a half-inch, a half-inch - oh, a quarter of an inch, half-inch, and then a

[redacted]

circular when you get around the out s - out - annulus of the cup. Then you start getting circular sides instead of straight sides. All of the flow comes from a little center spot and flows outward from the center toward the outside of the cells. No, in this case all of the bubbles have disappeared, except two.

CDR Jack, ... over there where you were.

SC Right.

01 22 09 27 CMP The longest cell we see is a four-sided one - -

TIME SKIP

01 22 09 29 CMP ... diamond. And it's an eighth of an inch on one side, an eighth of an inch on the other side, and maybe 3/16 on the other two sides.

CMP (Laughter)

CMP ... up here.

SC ...

CMP Yes, we're moving something close.

SC Okay.

LMP Houston, 17.

LMP At any rate, frame number 31 - frame number 31 and frames 24 and 25 show orientation of the experiment.

01 22 11 36 CMP And for information the first half of the experiment, we - orientation was 90 degrees from this one. (Laughter) The lineal cell was on the right, and the lineal cell was aligned with the XX axis.

CMP Okay. Something is a little different on this one here. Right at the top of the flow circle, it looks just like a finger. It's a curved surface that goes out and almost touches the - the circumference of the dish. And it looks just like

[redacted]

your - if holding up your finger and looking at it. It's that type of a shape to it. It comes back down, and it's about a half inch wide. The flow again emanates from a source that is almost on the fingertip, you might say.

01 22 13 09 CMP Okay. Somehow, that fingertip finally touched the complete circumference, and the tip of the finger disappeared.

CMP Okay. My - my small a - one-eighth inch - one-eighth of an inch sided diamond joined with another one, now, and one side of the diamond is gone. I still have three sides of the diamond and the fourth side of the diamond, or the upper right-hand corner of the diamond, you might say, has disappeared and goes on with another little square - or rectangle. One - one end of the rectangle is about 3/16 of an inch long; the other two sides are about three-eighths of an inch long.

LMP ...

01 22 14 18 CMP There are almost - no, it's almost in the center. Towards the center. Almost in the center. On the left edge, as you look at the piece of equipment, as you're looking at it, there are absolutely no - -

TIME SKIP

01 22 14 31 CMP - - patterns at all. There is a flow. You can see a stream of flow. Whoops. When I get up there and start looking at it, and I blew on it when I was talking. You can see a stream flow from the circumference toward the outer group of cells. The outer group of cells is at least - half an inch from the circumference, though, at that point.

LMP Do you get the impression that there's a general migration of cells to the right or down? Like those two that are touching there in the upper part seem to stretch.

[redacted]

CMP Stretch down in there?

LMP ...

CMP Yes. I think there's a general migration of - of the cells. Kind of toward the bottom of the circle, if you want to look at it that way. They seem to be stretching kind of in that direction, too.

CMP The first thing - -

CC ...

LMP No.

CMP No, toward the plus Y, as you're looking at it. Now, I'm trying to make all directions, with respect to the right-side-up of the equipment, you know.

LMP Are the chips going the same way?

CMP And, the first finger I talked about was at 12 o'clock. It has joined the edge now and almost disappeared. The second finger was - still essentially the way it was - is getting slightly closer to the edge. There's maybe - oh, less than 1/32 of an inch between the tip of the finger and the edge, and it goes out at - at 2 o'clock. Okay. From 3 o'clock on around to about 7 o'clock, the cells - It's in a shadow, and I can't see for sure if they're touching the edge or not, but it looks like they're probably essentially touching - sk - the edge.

CMP In a little bit. That's all right.

01 22 16 54 CMP And then from 7 o'clock on around to 12 o'clock again, none of the cells are touching the edge at all. And they're - oh, on the average of three-eighths of an inch from the outside circumference.

SC ...

CMP That's verified. It's up to the second baffle.

[redacted]

	CMP	All I had to do was start it in one position, and as soon as I started it - started it in one position, it whipped all the way around it. From the point I started it, it went all the way around in both directions.
	CC	Okay. That sounds beautiful. ...
	CMP	Yes. Right. I think in the low flow here, evidently, things even a little bit slower than they were in the high rate - in the high - in the high heat rate. But a little diamond, now, is almost joined with the rectangle. And I think given half a chance, it's tending to go into another five-sided figure.
01 22 19 26	CMP	17 - just about enough time. Let's see. ...
	LMP	We have those stream lines coming from the left of - of the ...
01 22 19 46	CMP	Yes. You'd better go too. Let's see, it's 17, 18 -

TIME SKIP

01 22 20 21	CMP	We started to move your switch without jiggling things. (Laughter)
	CDR	We what?
	CMP	And we started the cooldown at 18:40 on the watch.
	CMP	Okay. As we we're cooling down, the flow patterns tend to join together, so far. The ones on the outer periphery dissolve into straight lines. Straight lines em - emanating in a radial direction from the center of the circle.
	SC	...
	CMP	Okay. I got a little bit of film left here with ... high.

[redacted]

	SC	(Laughter) Yes.
	SC	Digital timer.
	SC	What?
	CMP	I don't know if he found that or not. I guess I can't sleep with it.
	SC	...
	CMP	My back is sore from sleeping underneath.
	CDR	Back?
	CMP	And, Houston, if you're listening; or DSE, if you're listening. Had a little bit of film - oop, there's the end of film right now. May as well stop it. Hey, I went to HIGH for a little ways.
01 22 24 36	CMP	Well, I still had a little bit of film when the cooldown - the 2-minute cooldown period was left, so I went back to HIGH on the FLOW PATTERN just to see what would happen. And it looked like they were starting out with - -

TIME SKIP

01 22 24 52	CMP	- - larger-sized cells developing into smaller ones. And, initially, all of the cells were about a half an inch in diameter, and they were closer to the periphery of the dish than they were in the LOW FLOW position.

# # #

[redacted]

(This page Unclassified)

Tape 17-03403

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSLUNAR COAST

Time Segments (AET)

From	To
02 17 27 26	02 18 46 57

Comm fair to good; time good

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[redacted]

02 17 27 26	CDR	Okay, Bob. For the ALFMED, CDR will be in the left seat. CMP will be in the center seat with the ALFMED. For our reporting, when we get the VOX, we'll just call out our first nomes to shorten it and the comments following. And Jack will be recording.
	CDR	You might want to take a look at this, Jack. Wonder if this thing will work if I don't put a lightweight on. Yes this will work for me.
	LMP	No, it won't. It won't reach around him.
	CDR	What ALFMED experiment was it?
	CDR	Yes, I can wear it this way.
	CDR	Supposed to leave your eyes open? Huh? Either way, you say? Doesn't say in here - it doesn't tell you whether to leave your eyes open or not. See it anywhere, Jack?
	LMP	Not yet.
02 17 30 11	LMP	Okay; the first flash is fairly important. ... Delta-T starts at then. Any subtle glows, clouds, or halos alone or with other events? Any apparent propagation? They want you to think, if you can, how long was its fraction of visual field? How sharp or diffuse?
	CMP	Okay.
	LMP	Any time you guys say "MARK it" at the same time, they're interested.
02 17 31 00	CMP	Okay. Houston. How do you read on VOX with the lightweight headset?
	CMP	Okay.
	LMP	Okay. That's all that is pertinent here.
	CDR	Do I start the same time he does when I'm getting ready to go?

[redacted]

	CMP	Yes. Wait a minute. Let me get this old VOX set to go here, first.
	LMP	Okay. You got to do some things to it. You got to get - you going to put the lightweight on? Or are you - -
	CDR	Yes, I can put this on over - -
	LMP	You got to plug it in and everything.
	CMP	Yes.
	LMP	Okay. Remove cover plate and leave in A-8. Unstow vacuum cleaner cable. Panel 201, AC UTILITY POWER, OFF. Verify.
02 17 32 09	CMP	Okay. UTILITY POWER is OFF.
	LMP	ALFMED POWER switch, OFF. Verify. POWER switch, OFF?
02 17 32 19	CMP	Yes, POWER switch is OFF.
	LMP	Okay. You're connecting it?
02 17 32 26	CMP	Okay. It's connected now.
	LMP	Okay. Panel 201, AC UTILITY POWER, ON (up).
02 17 32 33	CMP	Okay. UTILITY POWER is ON.
	LMP	Okay; and get in the couch.
	CMP	Okay.
	LMP	Once you're settled down, you should - yes, settled down - have ALFMED CLUTCH to OPERATE.
	CMP	Let me get strapped in here somehow, or I'll float all over.
	LMP	You should don your blindfolds simultaneously. Don't anybody go to sleep. Stand by.
	LMP	Okay. Bottom and side it says to photograph.

[redacted]

	LMP	This - this side and then I want to get down in front of you, I guess.
	CMP	Yes.
	LMP	Well, apparently they don't care whether you don it simultaneously or not, Gene.
	CDR	Okay. You want - you want ... put this on.
	LMP	Yes, they don't - they don't say that.
02 17 35 02	CMP	Okay. My blindfold's going on now.
	SC	...
	CMP	Okay. Sounds like they clipped. Okay. Someone will have to help me put this thing on now. Yes, just kind of like so. Yes. It goes around the old head. And then across the top.
	LMP	How's it feel?
	CMP	A little bit snug.
	LMP	Okay. Okay. You can't move around too much. That's not very good Velcro. Just barely on ...
	CMP	How's that?
	LMP	Pretty good.
	CDR	Okay. Let me get my pictures.
	CMP	I don't know - -
	CMP	Yes, but you ought to ... maintain your head in the same position, if you can.
	CDR	Yes, I'm going to wait until I get ... The contrast is so great that I don't think I can get a picture.
	LMP	Is the switch on? Switch is to OPERATE.

[redacted]

02 17 37 32	CMP	Switch to OPERATE now?
	LMP	Yes.
	LMP	You're going to have to turn that tape recorder off, or I'll never hear you.
	CMP	Why don't you turn it down a little bit?
	CDR	Okay, Ron. Can you let me get down here? And put your legs down, and I'll get a bottom shot.
	CDR	Picture of you lying there ... . I don't know what time - What time is it, Jack? I got Ron. I got his - Okay; you on? How long you had it on?
	LMP	Just put it on.
	CDR	68:18:20. Look at that.
	CMP	Go to OPERATE while you're taking the pictures there.
	LMP	Well, but I'm not ready to record.
	CDR	I don't know what the VOX switch is. This must be the VOX switch right here.
	LMP	Want me to get it? Is this it right here?
	CDR	Right.
02 17 38 58	CDR	Hello, Houston. CDR put his blindfold on at 68:18. I think I'm going to VOX.
	CDR	And how do you read me in VOX, Bob? This is Gene.
	LMP	Okay, Ron. I got - -
	CDR	Okay. I'm conducting the experiment. And the - frame Sierra Sierra is now at 45. I got two shots. One - two from the side and two from the bottom.
	CMP	Hey, looks like a countdown for ready to go, Jack?
	LMP	No. You're on. Let me get that time. 68: - -

[redacted]

	CDR	Hey, Bob, does it make any difference if your eyes are opened or closed?
	LMP	Okay. Where are my tables?
	CDR	Okay. Thank you.
	LMP	Okay. Ron, give them a MARK when you start, and I'll record it.
	CMP	Okay. We'll count down to start. 3, 2, 1 -
02 17 40 27	CMP	MARK it. It's buzzing.
	CDR	Yes.
	SC	...
02 17 45 35	CDR	Change it. The other side is not very good.
	CMP	Two.
02 17 46 07	CDR	MARK. Gene, I've got a series of random lines, which do not appear to be the width of my field of view, that are moving like a flashing horizon with thunder storms on the horizon. They're dimly flashing, and they're moving across the the eye from left to right and from top to bottom, individually.
	LMP	Both eyes?
	CDR	Both eyes. It's stopped now.
02 17 47 02	CDR	MARK. This is Gene again. Going from the upper left to the bottom right. Lines of the same sort of thing. Dimly lit flashing horizon-type flashes. But they're linear. They're linear, and they tend to come from the - either the upper left or the upper right and work their way downward. Now they've stopped.
	LMP	Both eyes?
	CDR	Both eyes.

[redacted]

02 17 48 50	CDR	MARK. Gene again. Both eyes. This time the same flashes in the horizon, but they don't seem to be moving out of both eyes. Tend to be up at the tops of both eyes. Just rapid, sequential, lightning-like flashes. They've stopped.
02 17 50 00	CDR	MARK. Gene again. Similar type of flashes. They don't seem to be moving, but they're coming from the right of the right eye and from the upper left of the right eye. And I can actually see an outline of a - of a curved horizon, and the flashes are coming out from behind it. They've stopped.
02 17 50 46	CDR	MARK. Gene again. I see - peripherally out of my right eye - I cannot see these flashes - but I can see peripherally the right-hand and the upper right-hand side of my right eye being lit up.
	LMP	Just flashes or clouds?
	CDR	Pardon?
	LMP	Are they flashes or clouds?
	CDR	This last one?
	LMP	Yes.
	CDR	They were peripherally. I couldn't see them. All I know is that there was some light out - peripherally - out - -
	LMP	A glow?
	CDR	Yes, but a flashing glow.
02 17 52 08	CDR	Oh, man, there's a good one. The left eye, right in the middle. It's almost a purple flash. It's still going. Right in the middle of my eye, and it's coming out behind a - a horizon that is almost - It starts out as a semicircle and then folds into a point like on a pencil. And then it disappears. That's the horizon, and the light is flashing from behind it. It's gone.

[redacted]

	CDR	Go ahead.
02 17 55 20	CDR	Stu, we lost all that last conversation. You better repeat it.
02 17 55 49	CMP	MARK. Ron. I got one. In the right eye coming from - back - going towards - Very narrow streaks.
	CDR	Okay.
02 17 59 25	CMP	MARK. Ron. One about 12 o'clock in the right eye. Looked like it was just a spot.
02 18 02 43	CMP	About 15 seconds ago. It's so dim I hardly noticed what it was, but kind of starting in my left eye and then - just a flash in the left eye and then a flash in the right eye. Very dim. Going left - from left to right.
02 18 04 38	CMP	MARK. Can't tell if it's right or left eye. Looks like it's almost between the two eyes. There's a - -
02 18 04 47	CMP	MARK. One in the left eye just about right in the center spot; no streak or anything. Just a spot. First spot seemed to be right between the two eyes, upper half of the field of view.
02 18 08 42	CDR	MARK. Gene. Streak from the upper right of the right eye, down to about the middle.
02 18 10 23	CMP	MARK. Ron. About 8 o'clock, center of a diameter out; just a bright flash. It's the brightest flash I've seen yet.
	LMP	What eye?
	CMP	Left eye.
02 18 10 43	CDR	Just about a second or two after Ron said, "MARK," I saw a vertical bright line on the left side of the left eye; just flashed.
02 18 11 35	CMP	It was the greatest intensity - the intensity on that last one I had - but - the brightness was there, but it was kind of a dull glow to it. It wasn't a - a spot you could really focus on.

[redacted]

02 18 13 21	CMP	MARK. Ron. Left eye, about 9:30, halfway - -
02 18 13 28	CDR	MARK - -
	CMP	- - to the left.
	CDR	- - Gene. Left eye. Very bright spot. Left eye, left side, about halfway in towards the middle. Well, it's the brightest one I've seen, and it's just a spot.
	CMP	Ron. The intensity of the last one I had was - oh, a fourth of the bright one I had just before that.
	LMP	The last one, Ron? Spot?
	CMP	Spot. Yes, the left eye.
02 18 15 07	CMP	MARK. About 5 seconds ago, about 6 o'clock in the right eye.
02 18 15 15	CMP	MARK. Right between the two eyes, seemed like. Both spots.
02 18 15 26	CDR	MARK. Gene. A sharp line from the center of the left eye to upper left-hand - upper left-hand side.
02 18 16 41	CDR	MARK. Gene. It's a very short - very short line, upper left hand of left eye going towards the right.
02 18 17 31	CDR	MARK. Gene. Upper right eye; tangential to my eye. Just a very short line. Moving a - -
02 18 17 44	CMP	MARK. Ron. Oh, a fourth a diameter out of the right eye. Bright spot. Seemed like it was coming in. I could see the spot and the streak. It went from that point kind of in - or up, I guess.
02 18 19 52	CDR	MARK. Gene. A dull flash in the bottom inside corner of the right eye.
02 18 20 01	CMP	MARK. Ron. Go ahead, Gene.

[redacted]

	CDR	Correction, Gene, was that - That was on the left eye, that last one.
02 18 20 10	CMP	Okay. The last one for Ron was at 10 o'clock. Three-fourths of the diameter out. Just a - was only - about an eighth of an inch in diameter.
	LMP	What eye?
	CMP	Right eye.
02 18 23 03	CDR	MARK. Gene.
02 18 23 05	CDR	MARK again. A flash - first flash was in the left eye on the left side. It went vertal - vertically up and away. And following that was the flash in the identically same spot. It was line flash, up and away.
	LMP	Say again.
	CDR	On the left side of each eye; and it went up in both cases, but they were split by about 2 seconds.
02 18 28 40	CMP	MARK. Ron. A fourth of the diameter out at 3 o'clock in the right eye. I mean a half a diameter - half a radius; put it that way.
02 18 28 51	CDR	MARK. Gene. A flash across the bottom of the right eye coming inward from left to right.
	CMP	The last one, it looked like it was a - -
02 18 29 14	CDR	MARK. Gene. A - just a spot flash in the bottom of the left eye.
	CMP	This is Ron. On my last one, it was just a spot flash. No direction to it at all.
02 18 29 57	CMP	Ron. MARK. MARK. This is Ron. When I first said the word - it kind of looks like a - almost a sine wave transition from the corner upper at 10 o'clock in the right eye to about 2 o'clock in the left eye, right between the two of them. The sine wave was - maybe two wiggles in it, and it was about a fourth of an inch long.

[redacted]

	LMP	Was it going to the left?
	CMP	Going from right to left. Yes.
	LMP	Where to the left?
	CMP	It was going into the left at about 2 o'clock.
	CDR	Turn that music higher.
	CMP	Yes.
	LMP	Want to wake you guys up. Started to get a partial there when - when I wore ...
02 18 31 20	CMP	MARK. Ron. Seemed like I looked up, and as I looked up, there was one in the left eye about 12 o'clock. Just a flash - on the outer periphery.
02 18 38 00	CMP	MARK. Ron. Peripherally - down about 06:30. Just a flash.
	LMP	Which eye?
	CMP	Right eye.
02 18 38 42	CMP	MARK. Ron. Left eye about 03:30, three-quarters of the radius out. A very dim flash.
	LMP	What time on the clock was it?
	CMP	About 03:30.
02 18 39 43	CMP	MARK. Ron. Left eye. Starting at 5 o'clock on a circumference going to 3 o'clock at about three-quarter diameter - three-quarter radius, I mean. It was just a straight line.
	CMP	Did I say left eye? I guess I did.
	LMP	Okay. You're coming up on - MARK at 60 seconds.
	CMP	Okay. Let's - -
	LMP	Let's do five more before we quit, Ron. Don't move it until I photograph.

[redacted]

	CMP	The motor's still going, so let's let it go until the MARK.
02 18 41 11	CMP	Okay; the motor quit.
	LMP	Okay. That was at 21:10.
	CDR	Okay. Is that it?
	CMP	Yes. I'll get that, Gene.
02 18 41 38	LMP	Okay. Conclude experiment. Doff blindfolds. ALFMED POWER switch OFF.
	CMP	Okay. Do you want to take a picture of it first?
	LMP	Yes. You can take the POWER switch OFF.
	CMP	Okay.
	LMP	And give a MARK when you turn the POWER switch OFF ... stop.
	CMP	Okay. Stand by. 3, 2, 1 -
02 18 41 58	CMP	MARK it. POWER switch OFF.
	LMP	Okay.
	LMP	Okay. Let me get a couple more pictures on the bottom and side.
	CDR	Okay, Bob or Stu.
02 18 42 36	CDR	Okay. Add - We'll add to today. Not last night, but - I guess the first night I was in bed - I definitely saw some of these, because I had a hard time going to bed to start with. I saw some of the same peripheral horizon-type things you said were not the type of data you were looking for, but I also saw a - some sets of the streaks. And probably the one most imposing thing I remember is - and the last one I remember before falling to sleep - was the fact that there was a very bright

[redacted]

spot that flashed right between my eyes like a very bright headlight - like a train coming at you, only with a flash. It's difficult, probably, to estimate the frequency of any of those, because I was in a - sort of a sleep-hazy mode. (Cough) But, then, as today, I saw some that flashed and lit up the horizon and some that lit up peripherally. And, I guess, as you say, that's a different kind of data, but I did see them there and they impressed me.

LMP ... Move your hands, Ron. Ron, you want to move your hands?

CMP Okay.

CDR And it might be interesting to know that I've never seen it before today.

LMP ... order, do you? That's what you call duplicate.

CMP Yes.

LMP When you're told to see spots, you're told to see spots (laughter).

CDR Okay. I just wanted you to - just told them like we saw them. That's all.

02 18 44 50 CDR I will say one thing though. No question in my mind but that they're there. Last trip I took, guess I just wasn't looking for them or paying any attention to them. Maybe they were there and I ignored them because of other things, but - but they're there.

LMP Okay. All you flash bugs down there - or flash bulbs I guess is the word - frame 50. I just took four pictures to show - two on the side and two on the bottom - to show the position of the ALFMED. And one of them of each set was focused on the ALFMED. The others were focused on the - the other two of the set were focused on the strut. And when you don't have anything else to do, why don't you have somebody predict where the S-IVB is.

[redacted]

I think I've got her spotted - behind us and above us with respect to the Earth and our travel from it. Oh, don't worry about it. Shoot, I thought you guys might have an idea off-the-cuff there.

CMP I hope they've got an idea where it is. My - -

LMP I'll tell you, I'll bet you Ron could give you a star sighting on it (laughter). I looked at it through the monocular, and it sure looks like the S-IVB.

CDR Where was it, Jack?

LMP Next time the Earth comes by, look up and - not, not, not North Pole but just up from from our - up and a little bit off towards the left.

CDR Okay. Is the Earth coming your way?

LMP Right; it's flashing.

CDR There it is. Give it to me.

LMP It's flashing.

CMP What's that, Bob?

CDR Hey!

02 18 46 57 CMP Yes, I've got to get it to - get the plate moved back down there yet. Take the blindfold off first so I can see what I'm doing.

# # #

[redacted]

(This page Unclassified)

Tape 17-03419

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSLUNAR COAST

Time Segments (AET)

From	To
03 09 23 50	03 10 08 05

Time good; voice fair to poor.

SECURITY CLASSIFICATION

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[redacted]

03 09 23 50	CDR	Okay, PAN CAMERA going to POWER.
	LMP	And they put the Velcro in such a great spot.
	CDR	Okay, Gordo. We're in the SIM bay door jett attitude.
	CMP	There's another ... yet. Does it look like it's purged? Does it look like it's through purging down there?
	CDR	Yes.
	LMP	Okay, you'll need your star chart.
	CDR	Here, can't you -
03 09 26 15	LMP	Okay, Houston. PAN CAMERA POWER is going to BOOST.
	CMP	Yes, it just stopped. I've got to unplug that thing down there.
	CMP	Yes, 1/24 - I mean, 24 frames a second - f/8 - 100 feet. Watch your footage ...
	CDR	f/8 at 250th, Jack. And 100 feet. They say use 5 percent of the mag.
	LMP	Okay.
	CDR	... down there.
	CMP	Okay, down to 181. Circuit breaker LOGIC POWER, MAIN A - show them CLOSED. MAIN B, going CLOSED. Yes, I'm in VOX. I don't hear myself very well. Houston, do you hear me? ... you. I'm in the wrong - I put Gene on VOX. (Laughter) Okay. Would you put me on VOX, Gene? I'm in - I'm in the other panel.
	CDR	Okay, you're in VOX now.
03 09 30 05	CMP	Okay, Houston I'm in VOX now. Do you read? Okay; on panel 181, the LOGIC POWER MAIN A, MAIN B circuit breakers are CLOSED.
	LMP	Okay, you want LOGIC POWER, two, to JETT.

[redacted]

	CMP	Okay, LOGIC POWER number 1 is going to JETT. Number 2 to JETT.
	LMP	Standing by for your GO, Houston. Wait a minute. This is where it - when you go to JETT, that's where it happens, huh?
	CMP	That's where it happens. Soon as I - -
	LMP	Okay; I better get ready. Stand by. Stand by.
	CMP	Okay, Jack. Let me know when you've got the camera ready.
	LMP	Are you all set, Geno?
03 09 31 59	CDR	Yes. Okay, Houston. You say we are GO to JETT the SIM bay door a little early, huh?
	CDR	Okay. Good ... I think trajectory has something to do with it.
	LMP	Yes. Good ...
	CDR	Did you check this at 24 frames?
	CMP	No, I checked it at one frame. You might check it.
	CDR	I did. You're down to that point where the SIM - -
	CDR	Okay, Gordo. We'll do it on - on Ron's mark down there.
	LMP	Just a second. ... Hey, Houston. You know, this attitude - this attitude has the Sun right into window 5. It's probably going to be on the lens of the camera. I'll - I'll try to shade it the best I can, but I don't have an awful lot of hope for these pictures.
	CMP	I think we're probably stuck with it, Jack, because we need - to be in this right attitude. ...
03 09 32 39	CDR	Okay, Ron. Let her go.
	CMP	Okay. SIM door jett - 5, 4, 3, 2, 1 -

[redacted]

03 09 32 50	CMP	JETT.
	CDR	Wham!
	CMP	Oh, got a good bang. Can you see it?
	CDR	There it goes.
	LMP	Never saw it.
	CDR	Houston, there it goes. I got it out the hatch window. It looks like it was a clean jett. It's rolling and pitching and yawing slightly. There's a lot of garbage that came out with it.
	CMP	Can you take a picture, Gene?
	CDR	Yes. Yes, I think I got it ... Oh, no, there it is.
	CMP	Let me see it. Ah-ha!
	CDR	... taking a picture of the garbage.
	CMP	(Laughter) You take a picture. Yes. There it goes.
	CDR	Hello, Houston. How do you read?
	CMP	Clearly acoustic, isn't it?
	CDR	Okay, did you get the word we got a clean jett? Okay. The door's moving - the door's moving directly away from us, mostly rolling. And it looks like it was a very clean - clean separation.
	LMP	Will you explain something to me, Ron? How come 15 never noticed this ...? Remember? I think that's - Did it go?
	CMP	Boy, we got a good bang on it. You could hear that - that pyro going, I think.
	LMP	You could feel it.
03 09 34 24	CMP	It's rotating about five - or one revolution per 5 seconds. And it's rotating - what, about the long axis? Yes, rotating about the long axis.

[redacted]

	CDR	Houston, the garbage that I said went with it was just a small amount of debris, I'm sure, around the sealant pyro area. There was one - oh, about a 4-foot-length piece of - oh, 1- or 2-inch tapelike material that also went out with it.
	CMP	Okay. What do we do with these LOGIC POWER switches? Don't they go back to OFF, down?
	CDR	Okay. DOOR JETT OFF, down.
03 09 35 27	CMP	DOOR JETT's OFF, down.
	CDR	LOGIC POWER, two, to DEPLOY/RETRACT.
03 09 35 31	CMP	Okay, we're going to DEPLOY/RETRACT on number 1.
03 09 35 34	CMP	DEPLOY/RETRACT on number 2.
	CDR	And the FUEL CELL VALVES are NORMAL. FUEL CELL REACs VALVES are NORMAL. I'm sort of glad we had those in LATCH.
	CMP	Yes, me, too. You know, that was a pretty good bang.
	LMP	Okay. SM RCS PROPELLANT talkbacks; eight gray, verify.
	CDR	Okay. They're all gray.
	SC	...
	CDR	Okay, SM RCS HELIUM talkbacks; eight gray, verify.
	SC	...
03 09 36 17	CDR	Yes, they're all gray.
	LMP	SM RCS SEC PROPELLANT FUEL PRESSURE, four CLOSE.
	CDR	... SECONDARY. ... Okay.
	LMP	Pan camera's up.
	CDR	Well, I'm - I got 10 degrees loaded. That's what we got copied down here as a change.

[redacted]

	CDR	Okay. We got 320, 010, 324, and before I go to muver - maneuver, I'll roll right about 12 degrees.
	SC	...
	CDR	Thank you, sir. Okay, HEATERS.
	LMP	Okay, and the UV SPECTROMETER - is going to go on here -
03 09 37 30	LMP	MARK it. Okay, and the IR will be OFF on your cue. That's the same as ... rate command, Gene.
	CDR	Oh, that's right.
03 09 37 50	LMP	Okay, just give us a call.
	CDR	Okay, what's next? I ...
	SC	...
	CDR	... use experiment checklist?
	SC	...
	CMP	... a real ...
	SC	...
	CDR	Hey, there's a lot more dynamics here than I'd ever ...
	LMP	Yes. ...
	LMP	The 15 guys were ...
	CMP	Well, they were suited.
	LMP	They said they didn't even - Oh, that's right. They were suited.
	CDR	Oh, that's right.
	CMP	Yes.
	CDR	There's no question but that that's where it goes.
	LMP	...

[redacted]

	CMP	Yes.
	CDR	Okay, circuit breaker O_2 TANK 100-WATT HEATERS 1 and 2, OPEN. Okay.
03 09 39 40	LMP	Okay, the 100-WATT O_2 HEATER circuit breakers coming OPEN.
	CMP	Hundred - Which ones?
	LMP	100s.
	CMP	All three of them?
	CDR	No. One and 2.
	LMP	One and 2.
	CMP	One and 2.
	SC	... upside down I can't read.
03 09 39 58	CMP	O_2 TANK 100-WATT HEATERS; 1, MAIN A, OPEN; 2, MAIN B, OPEN.
	CDR	Okay, and the O_2 HEATERS 1 and 2 to AUTO; and 3, OFF.
03 09 40 13	LMP	Okay, O_2 HEATERS 1 and 2 going to AUTO, and 3, OFF. It was a little early right then, but I guess it's all right. ... attitude.
	CDR	And you know the high gain will be minus 29 and 17.
	LMP	Yes.
	CMP	How's the AUX batteries, Jack? Is it ...?
	LMP	You mean the O_2 - -
	CMP	The O_2 ...
	LMP	We'll check it.
	CDR	Ron, check the CM DELTA-P ...
	LMP	It's gray.

[redacted]

	CMP	It's gray? Okay.
	CMP	1.6.
	CDR	Okay, not yet. We'll wait a little while, but you'll have to go through CM/LM pressure equalization ...
	CDR	... got a ...
	CMP	Yes.
	CDR	...
	CMP	Yes. I got my foot stuck.
03 09 41 48	CDR	Okay, Gordo. We'll wait until 50 past the hour and pick up the LM/CM DELTA-P. We're still reading 0.6. And we're in the process of maneuvering, and I guess I'll start to see if I can't get you some biomed.
	CMP	... old biomed ...
	LMP	I don't know whether you were watching the LMP on the door jett. Did you see jett on my heartbeat?
	SC	(Laughter)
	LMP	I guess I was remembering, erroneously, 15's comment that it was very quiet. But, I - of course, Ron reminded me they were in the suits.
	CMP	... about 24 percent.
	LMP	How stable can you get?
	CMP	And, Houston, 17 here. Mag Bravo Bravo is indicating 76 percent now - 76-percent full.
03 09 43 47	CDR	And, Gordo, we are watching the 8-ball.
	CMP	One thing I guess I ought to check ...
	SC	... down here.
	CMP	Boy, we sure need it.

[redacted]

	LMP	... off, isn't it, Ron?
	CMP	I don't know.
	SC	... DELTA-P?
	SC	Yes.
	CDR	We'll wait until ...
	LMP	Yes, you get to dock in about an hour ...
	CMP	...
	LMP	Hour and a half.
	CDR	One of you guys is ... up a storm. I wish it were me. Whew!
	CMP	That wasn't me that time ... Whew!
03 09 46 18	CDR	No wonder you guys don't have gas on your stomach.
	SC	...
	CMP	Whew!
	LMP	I might have had.
	CMP	Yes.
	CDR	I think it's coming out of here. I think he ... into the intake.
	CMP	(Laughter) ...
	CDR	You guys usually don't - Whew! Man! (Laughter) Oh, man. I know, but that one was the worst. That must have been the clam chowder last night.
	CMP	Well, ... we're not that comparable ... last night. I don't know what we had, but -
	CDR	I think that's the all-time winner right there.
	CMP	Yes.
	LMP	Better than my ... blue bag, huh?

[redacted]

	CDR	Yes. ...
	CMP	My gosh darn scissors got to be somewhere.
	CDR	You stuck them in your pocket or somewhere. You put them in your suit pocket?
03 09 47 31	CMP	I lost them - As soon as I got up the next morning, they weren't there.
	CDR	Well, I ... over to the wrong place to take pictures of that door, I'll tell you.
	LMP	Yes, it should have been out of window 3.
	CDR	I had her going.
	LMP	Yes, but there won't be too many more ... (Laughter)
	LMP	It eventually came up at window 5 there, but - -
	CDR	Yes. I figured I'd do it, but I wasn't sure how fast it was coming - coming by.
	LMP	You can't get all the objectives.
	CDR	We got pictures of it. But it wasn't what ...
	LMP	I'm about ready to take a piece of tape -
03 09 49 53	LMP	Want to be sure and change that mag before we get into lunar orbit.
	CDR	Which one?
	LMP	...
	CDR	... program.
	LMP	The second ... pads ...
	CDR	... program ...
	LMP	Yes.
	CDR	Let's see, the 35 is ... program.
	LMP	Yes, 35 is ...

[redacted]

	CDR	Those mags we have on there okay?
	LMP	... Yes, but it's interior color.
	CDR	Oh, ... That mag's dead once you take it out, isn't it?
	LMP	Yes. There's 70 pictures on it. So we might as well use them.
	CMP	How many are on there?
	LMP	Huh?
03 09 50 45	CMP	How many have we taken?
	LMP	I guess about 60, I think - 45. You guys got a ...
	CMP	The next one is ...
	LMP	... this thing -
	CDR	What are you looking for?
	LMP	Look like ...
	CDR	What?
	SC	...
	CDR	I think you improved it by doing that ...
	LMP	Now put your fingers over your mike.
	CDR	Yes, we're getting ...
	LMP	Yes, but why putting his fingers over his mike?
	CMP	Still getting feedback.
	LMP	No, but it's better - because we're getting it through here. But why when he puts his fingers over his mike, does he improve the quality?
03 09 52 11	CDR	Because the quality isn't coming through here. Even though his fingers are over his mike, he's still getting feedback.

[redacted]

	LMP	You sure improve your voice by putting your fingers over your mike.
	CMP	I improved my voice by doing that.
	LMP	Yes. Got all those ...
	CMP	You did?
	LMP	Yes.
	CMP	Son of a gun.
	LMP	Talk and just ...
	CMP	...
	SC	Getting rid of a lot ...
	CMP	Must be some holes other than on the eardrum.
	CMP	Tape recorder working?
	LMP	Yes.
03 09 53 59	CMP	That's the old tape recorder with fingers over the end of the mike. That's the tape recorder without the fingers over the end of the mike.
	LMP	Okay, you've got it to AUTO, and I think we may have made a new discovery about microphones up here. Well, Gordy, it looks as if you can improve your voice quality by putting fingers over the end of the mike booms. At least, that works on the intercom.
	CDR	Want to hand me the med kit? Okay.
	CMP	When did you stick this ...?
	CDR	Huh?
	CMP	The first - second day.
03 09 54 00	CDR	Yes, it went on right away.
	CMP	Yes, but somebody didn't - I didn't put the one side on.

[redacted]

CDR I did.

CMP The first day?

CDR Yes.

CMP Well, there's no sense in worrying about the -

LMP Gene? Here, why don't you let me hand you what you need?

CDR Well, I've got it on.

CMP Okay, you're disconnected?

LMP You want a little bag for your used stuff, Gene? Oh, that's right, you're ... Here you go.

LMP Ron, you should be able to see the Earth out of the optics.

CMP Out of this optics?

LMP ...

CMP Okay.

LMP Okay, IR coming OFF.

03 09 55 28 LMP MARK it.

CMP Boy, those things are getting hot up in there, don't they?

CMP What are we supposed to be doing now?

CDR Well, we're waiting for - waiting for - Well, at ... in about 15 minutes, we'll do the LM DELTA-P stuff. And then in another hour or so, you do a P52. ... they tell you what's required.

LMP Hey, Gordy. Who's operating the trench in front of you today?

LMP They're a trio of musketeers if I ever heard of one. All they lack is a French accent.

[redacted]

03 09 58 09	LMP	I wasn't going to exercise any value judgments, Gordy.
	LMP	What did that midcourse finally turn out to ...?
	LMP	Inner tropical convergent ... (laughter).
	CMP	(Laughter) ...
	CMP	You know, the ... looking through the ... on my side now.
	CDR	You got the Earth?
	CMP	Yes, I got the Earth, but I was going to say the horizon is a lot bluer ... to see the landmarks ... I can't tell the difference.
	CDR	And that landmark has an orange hue to it, doesn't it?
	CMP	Yes.
	CDR	Give it an orange?
	CMP	Landmark line of sight does.
	CDR	Yes.
	CMP	It's ...
	LMP	Okay, Gordy. I was just checking to see if I could find the Moon, and I still can't see it out there. I'll be with you in 30 seconds.
03 10 02 44	LMP	Okay, Gordy. Go ahead.
	LMP	Okay. Preliminary LOI, SPS/G&N. 66361; plus 1.21, minus 0.12; 088:54:22.71; minus 2798.8, plus 1045.7, minus 0037.3; all zeros, all zeros, all zeros; 0170.1, plus 0052.5; 2988.0 6:38, 2981.7; 45, 252.1, 13.5. Set stars are Sirius and Rigel; 122, 354, 000. No ullage. LM weight is 36312, and single-bank burn time is 06:51.
03 10 06 23	LMP	Okay, 22.77.

[redacted]

	CMP	Okay, Houston. At 84:45, we've got about 2-1/2 to 3 minutes at 1 frame a second on mag Bravo Bravo through the celestial adapter of the Earth.
	CDR	Okay, guys. Here, I'll try again.
03 10 08 05	LMP	Oops. It's right there. That's good.

# # #

[redacted]

(This page Unclassified)

Tape 17-03420

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSLUNAR COAST

Time Segments (AET)

From	To
03 10 08 08	03 10 14 32

Time, good; voice, okay.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03408

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 2

Time Segments (AET)

From	To
03 10 07 15	03 10 07 15
03 16 42 21	03 16 48 21

Time good, voice fair

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[redacted]

03 10 07 15	LMP	Okay, Houston, - -

TIME SKIP

03 16 42 21	LMP	... generate a lot more glass than usual. They're just higher energy impact.
	CMP	Okay, ... frame - 67 was Lobachevsky mag 00.
	CDR	Let's see, AOS is at 24.
	CMP	... right there; what did they want?
	CDR	Did we get all this, Ron?
	CMP	Yes, I got that.
	CDR	DISABLE AC 1?
	CMP	Okay. I've got ... degrees out here. They may give us a call.
	CMP	MAPPING CAMERA, RETRACT and talkback was gray.
	CDR	We got everything done?
	CMP	We have everything done - -
	CDR	You got all these things here?
	CMP	Yes, we did that.
	CDR	You get the T-start again?
	CMP	Yes.
	CDR	Okay.
	CMP	T-start at 18:07. That's close enough.
	CDR	Okay.
	CDR	You got the MAPPING CAMERA, RETRACT and every - -
	CMP	Yes.

[redacted]

	CDR	Okay. This is all done. OMNI Delta then?
	CMP	Okay. We're on OMNI Delta.
	CDR	27:43 we want to stop the pan camera again.
	LMP	Boy, there's a bright one down there.
	LMP	Some of that dark stuff just looks like blocks.
	CMP	Yes, I think I can finally look at those things upside down.
	LMP	Well, you've got to know which way you're going and which way you're pointing. That's the big problem. I've got the feeling that someone brought a big powder puff and powdered the whole back side - -
	CMP	... water.
	LMP	- - Here's one - here's one off to the south that is - has three albedo contrasts. Looks very much like what you described, except it has one more - one more in the ... - -
	CMP	Okay, Houston. We're with you on the OMNI Delta.
	LMP	- - that is much darker than the others.
	CC	Roger, Ron. We read you loud and clear.
	CDR	Okay, Robert. We should have gotten everything right on up through AOS here in the Flight Plan.
	CDR	And the pan camera should be running right, now.
03 16 45 05	CDR	Okay, Jack, you can go - Ron, you can go minus 5 and plus 15.
	CMP	Okay; thanks. AOS plus 3.
	CDR	Okay.
	CMP	At about 27 or something.

[redacted]

	CMP	Okay, Houston. America here. We stopped the orbital photo path, frame 59. And at about the substellar point, we took 59 to 66, and frame 67 was taken of the, oh, the dark side on the corner of Lobachevsky.
03 16 45 55	CDR	What have we got coming up there, Jack?
	LMP	We got Orientale - -
	CDR	Not Orientale.
	LMP	I mean ... is off to the south, and we're coming up on Marginis and Crisium. Can you see - I guess I can't see Neper, huh? Well, no. I think it's going to be south of us.
	CMP	It's going to be south of us, I think. I'll be able to see it over here.
	LMP	Those frames that Ron mentioned - this is Jack - that he mentioned were taken of an area where there's a much lighter gray albedo. Rather than the tannish gray, it's pure gray material that generally is on the rim crest of a number of craters. It may be related to the swirls that we see elsewhere.
03 16 47 07	CDR	Did you go HIGH GAIN yet? Three minutes ...
	LMP	Okay. Here comes Neper.
	CMP	Okay; 27:43 for pan camera stop. ...
	CDR	That's right now.
	CMP	Right now? ...
	CDR	Yes.
03 16 47 15	CMP	Okay. 42, 43, PAN CAMERA, STOP.
	LMP	STOP or OFF or STANDBY?
	CMP	PAN CAMERA, STANDBY.
	LMP	STANDBY.

[redacted]

	CDR	V/H, normal.
	LMP	Okay.
	CDR	Bob, we're - -
	LMP	What else?
	CDR	- - abeam of Al-Biruni and coming up Goddard and - -
	LMP	Got anything else?
	CDR	- - Marginis right now.
03 16 48 03	CMP	PAN CAMERA, OFF, on cue.
	LMP	Well, we did it, didn't we?
	CMP	No, you went to STANDBY. You went to STANDBY.
	LMP	Do you need the power off? Okay.
	CMP	On cue, yes. Leave it like that ...
	LMP	Okay. Their cue, not ours.
	CMP	But it does oscillate quite a bit here in this REACQ.
	LMP	All right.
03 16 48 21	CDR	Al-Biruni has got variations in the - its floor, variations in albedo. It almost looks like a pattern as if water were flowing on a beach. It's that irregular. Not in great areas, but in small areas around the southern side, and the part that looks like it's a water-washing pattern is of a much lighter albedo, although I cannot see any real source for it. The texture, however, looks about the same.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03402

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSLUNAR COAST

Time Segments (AET)

From	To
03 15 55 39	03 16 44 38

Voice fair; time good.

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[redacted]

03 15 55 39	CMP	- - after AOS - -
	LMP	We're going to do a VERB ...
03 15 55 45	CMP	MANUAL and WIDE, minus 5 and YAW, 15.
	LMP	Okay, Gordy. I may not have got the COMMAND RESET at 6 minutes - -
	CMP	Those are the SIM bay jets. Okay. Let's go. Let me go ahead and do that. Yes.
	LMP	- - and ... let us know ...
	CDR	Can I do that in P20?
	CMP	Yes, you can do it.
	CMP	You've got A/C ROLL going?
	CC	... like you to - -
	CDR	Which ones you want?
	CC	- - go ahead and get the jet inhibits and the covers open as shown in the Flight Plan so we can see that before we lose you.
03 15 56 48	CMP	Okay. IR COVER, OPEN, and - Well, let's inhibit the jets.
	CDR	What other jets you want on?
	CMP	A-1 and C-2, ON.
03 15 56 55	CDR	Oh. Two ON. Go ahead.
	CMP	A-3 and C-4.
	CDR	A-3 and C-4 are ON?
	CMP	Yes.
03 15 57 05	CDR	Going ON.
	CMP	B-3 and D-4.
	CDR	B-3?

[redacted]

	CMP	Yes, and D-4. The ones with the arrows on them.
	LMP	Okay. UV COVER is coming OPEN -
03 15 57 18	LMP	MARK it.
	CDR	Okay. I don't have many special things right now, but - -
	CMP	That's all right. Okay.
03 15 57 20	CDR	Bs are OFF.
	CMP	Bs are OFF. That's right. They're supposed to be. It's A-1 and C-2.
	LMP	... want me to stay in HIGH BIT RATE?
	CDR	Okay.
	CMP	Okay. IR, OPEN - -
	CC	... you're there.
	CMP	- - Yes.
	CC	You're going to have to do it anyway, so since you're there already, stay there.
	CMP	HIGH BIT RATE, RECORDER going.
03 15 57 41	LMP	Okay. We're there. We've got tape motion.
03 15 57 50	CDR	Gordy, the dead band - or the A/C - B/D, A/C ROLL's been changed, and you should have the proper jet configuration now.
	CC	Okay. ...
	CDR	Okay.
	CDR	Okay. After AOS, OMNI Delta.
03 15 58 49	CMP	IR and the UV. Might as well open up the MAPPING CAMERA/LASER ALTIMETER, too.
03 15 59 00	LMP	Okay, ... MAPPING CAMERA/LASER ALTIMETER ...

[redacted]

	CC	Okay, Jack.
	CMP	Okay. Would you EXTEND the MAPPING CAMERA, and give them a mark so we can time it?
	LMP	...
	CMP	Yes. Give them a mark, too.
	LMP	Okay. We're going to EXTEND the MAPPING CAMERA.
	CMP	Yes, I'll catch this. Yes.
03 15 59 39	LMP	... Barber pole.
	CMP	Yes, I don't know. Supposed to be - they say 4 minutes, but - I've got one going here. Thirty seconds.
	CMP	I guess all those switches and things are done, circuit breakers and things like that. SIM bay ESSENTIAL bus?
	CDR	How do I know when it's out? When that thing goes gray?
	CMP	When it goes to gray.
	CDR	Did we lose - -
	CMP	I'll get all of the photos of the thing. ... Let's see now. Window 3 and 4. Yes, 3 and 4. And if - if you'll handle the mapping camera and all that stuff now, which is - -
	CDR	Yes, I'll give you the marks on all that stuff.
	CMP	Yes, that'd be - Jack, Gene, could you just kind of - -
	CDR	Hey, you got OMNI Delta?
03 16 01 27	CMP	Gray? Gee, that was a minute and 30 seconds.
	CDR	No, it was longer than that, I bet.
	CMP	No, it wasn't. Minute and 45 seconds.
	CDR	I bet it was 2 something.

[redacted]

	CMP	No, it wasn't. I started the clock, and it - Either that or my - doesn't work. And I got a minute and 45 seconds.
	CDR	Yes. It was longer than a min - I'll bet it more than - Well, I don't know.
	CMP	It's still pretty good. Okay.
	CDR	Okay. OMNI Delta, and go minus 5 and 15 for AOS.
03 16 02 02	CMP	Oh, yes. MANUAL and WIDE. 2 Minus 5, 15.
	CDR	And Delta. Right?
03 16 02 13	CMP	Yes, OMNI Delta.
	CDR	And you're on HIGH BIT RATE, RECORD, FORWARD, COMMAND RESET.
	CMP	Sunrise? Okay. Don't see anything yet. (Laughter)
	CDR	Okay. Okay; let's see, we want to get the - let's get the PAN CAMERA to STANDBY, STEREO - -
	CMP	What time are we supposed to start here - 51, that's 8 minutes - -
	CDR	Are these all separate switches?
	CMP	Yes.
	CDR	STANDBY - on PAN CAMERA?
	CMP	Yes.
	CDR	STANDBY? STEREO? I can't - Put Jack's INTERCOM switch ON, will you, Ron?
	CMP	Okay.
	CDR	Okay. STANDBY?
03 16 03 13	CMP	It's STANDBY.
	CDR	STEREO?
03 16 03 15	CMP	It's STEREO.

[redacted]

	CDR	POWER?
03 16 03 17	CMP	It's POWER now.
	CDR	V/H.
	CMP	You want it now?
	CDR	Yes.
03 16 03 20	CMP	Okay. POWER.
	CDR	V/H. HIGH ALTITUDE.
03 16 03 24	CMP	Okay. HIGH ALTITUDE.
	CDR	Okay, now. LASER ALT - You want the LASER ALTIMETER, ON, too, huh?
	CMP	Yes, but that's pretty much on a time thing yet.
	CDR	Okay. Wait a couple of minutes for that. Here's what we're going to do, Jack. We've got a couple of minutes. We want to put the LASER ALTIMETER, ON, and about - -
	LMP	Did you want to start the PAN?
	CDR	Not yet.
	CMP	No, we aren't ... - -
	CDR	No, I've got to start the - start that - -
	CMP	Go ahead.
	CDR	This thing's got STANDBY, STEREO, POWER, and - -
	LMP	Got it.
	CDR	- - HIGH ALTITUDE.
	LMP	Got it.
03 16 03 51	CDR	Okay. Then the next things we're going to do - Don't do them yet - are LASER ALTIMETER, ON; then IMAGE MOTION, ON; then MAPPING CAMERA, ON; and PAN CAMERA - I'll give you a T-start on it. And then IMAGE MOTION, INCREASE - - [redacted]

[redacted]

	LMP	Okay.
	CDR	What's BP plus four steps?
	CMP	That's barber pole plus four steps.
	CDR	Oh, yes. Yes. Okay. And then - -
	CMP	I do.
	CDR	- - That's right. I'll give you all those calls, and they all come one right after the other starting about 48, and it's 44 now.
	LMP	Okay. Four minutes, Gene?
	CDR	And then, Ron?
	CMP	Yes, okay.
	CMP	And then, Ron, yours is Gelley - Gell-oe, - -
	CMP	Galois.
	CDR	Gal-ois. And you want command module 3, you want the 80-millimeter lens - intervalometer - -
03 16 04 33	CMP	Oh, there ...
	CDR	- - at 20.
	CMP	Look at that! Look at that!
	LMP	Look at that! Isn't that pretty?
	CMP	See it, Gene?
	CDR	No.
	CMP	It's back here.
	CDR	What are you looking at?
	CMP	It's the sunrise, terminator.
	CDR	Couldn't see it. I can't see it.

[redacted]

	CMP	See it ... back over there.
	CDR	Can't do it. It's gone.
	CMP	It is?
	CDR	Gone.
	CMP	Terminator's gone?
	CDR	I can't even see the Moon.
	CMP	Well, why don't you come over here and look?
	CDR	Yes, ... - -
	CMP	Try to see it. Here, put your - -
	CDR	- - okay. Oh! (Laughter) Shoot.
	CMP	That's what we saw coming in, while ago.
	CDR	Been snowing.
	SC	(Cough)
03 16 05 19	CDR	Okay. We're rounded out a little bit more now - -
	CMP	Can you swing out and get - get a shot of Korolev while I go to the next one?
	CDR	Manischweitz! That's Korolev. That's that big ridge, Jack - -
	LMP	That's what it is, yes.
	CDR	- - that we saw coming in, only we're so much closer now. We're rounding off - -
	LMP	We came in from a lot higher - Korolev and on up and around.
	CDR	Well, that's that - that's that ridge of a - Look at that thing. No wonder it looked like a central - lunar central feature, Jack.

[redacted]

	LMP	Yes, it is. It's - it's part of a ring, but it - there's only one part of it that really sticks out.
	CDR	Yes. It's snowing out there.
	CMP	It is?
	CDR	Yes, how else did it get white?
	LMP	... get started here.
03 16 05 53	CDR	Okay. Let's see. We got another minute or so. Ron, yours is f/2.8 at 1/250, infinity.
	CMP	Okay.
	CDR	Fifty-eight frames?
	CMP	Yes, pretty long set.
	LMP	He's going to be clicking for years.
	CDR	Hey, I'll give you your changes. I'll try and give you your changes on this - Boy, I tell you - this is nothing but paperwork.
	CMP	Yes, this rev is going to be a good one.
	CDR	Okay, Jack. You can put the LASER ALTIMETER, ON.
	LMP	Say when. Now?
	CDR	Now. Yes.
03 16 06 25	LMP	Okay. LASER ALTIMETER, ON.
	CDR	IMA - IMAGE MOTION, ON?
03 16 06 30	LMP	ON.
	CDR	Okay. Now hold off. It says at 144, I want the - I want the MAPPING CAMERA out, but I don't know where the heck - 144, Ron, that's about - Let's see, Korolev is right on - -
	CMP	No, that's right. Just time - -

[redacted]

	CDR	I'll do it on time.
	CMP	Do it on time. Do it on time. Do it on time. Goes in there somewhere.
03 16 06 50	CDR	Another 2 minutes for the MAPPING CAMERA.
	CMP	Okay.
	CDR	You want to start the center window, Ron?
	CMP	Yes.
	CDR	Okay.
	CMP	If I can find out which - -
	CDR	(Cough)
	CMP	- - one clicks.
	CDR	Which what?
	CMP	Okay. Let's see. That's got to be - -
03 16 07 02	CDR	I'll cue you on time. Oh, that's Korolev with that big central - that ridge. It's really a - I don't think you can quite see Korolev yet.
	CMP	Can you?
	CDR	Oh, yes, I think so. That's the same one I was seeing coming in, I'm pretty sure.
	CMP	That's Korolev with the big ridge going down through there.
	CDR	Yes. Yes.
	CMP	Okay. Galois is supposed to have a central peak in the thing. Korolev is right on the terminator now.
	CDR	Okay, Jack. You can put the MAPPING CAMERA, ON.
	LMP	... No, I think your Korolev - No, I think it's - it's - I don't think you can see it quite yet.

[redacted]

03 16 07 39	CMP	MAPPING CAMERA, ON.
	CDR	Yes, let's just verify all these.
	CMP	Yes, sir.
	CDR	PAN CAMERA is STANDBY, STEREO, POWER.
03 16 07 43	CMP	Yes.
	CDR	V/H, HIGH ALTITUDE.
03 16 07 47	CMP	Yes. LASER - -
	CDR	LASER ALTIMETER, ON.
03 16 07 49	CMP	Yes.
	CDR	IMAGE MOTION, ON.
03 16 07 51	CMP	Yes.
	CDR	You got the MAPPING CAMERA, ON?
03 16 07 54	CMP	Okay, it's ON now.
	CDR	Okay. And that's at - that's at 47.50. Okay. And PAN CAMERA, on 1 in 1 minute - no, about 2-1/2 minutes.
	CMP	Okay.
	CDR	Gosh darn. Son of a gun. Pardon my French.
	CDR	Actually, I'm looking south now, aren't I?
	CMP	Yes.
	CMP	... next one here.
	CDR	Yes, okay. South. I've got it. Mare B, or something.
	CMP	Yes. Okay. That's Crookes right down there at the bottom.

[redacted]

	CDR	What do I have written in the margin that's for this time here?
	LMP	Korolev and Apollo, and then the highlands.
	CDR	Okay.
03 16 09 21	CDR	Okay. We've got about a minute to go for the PAN CAMERA.
	CMP	Okay.
	CDR	About a minute to go.
	CMP	Standing by.
	CDR	And then after that, you want to INCREASE the IMAGE MOTION, barber pole plus four steps, and then ON.
	CMP	Okay. Will do. IMAGE MOTION, ON, you mean?
	CDR	No, you've already got the IMAGE MOTION, ON.
	CMP	Okay, but the camera.
03 16 09 42	CDR	I'll give you a PAN CAMERA start here. I don't know - -
	CMP	Okay. What was that last ON on?
	CDR	And then after that, it'll be the IMAGE MOTION, INCREASE, barber pole plus four steps/ON.
	CMP	Okay. Okay. I got it. ... spring loaded. ... No, Korolev is way on up there yet.
	CDR	Yes, I think so.
	CMP	Yes, okay. ... That's Galois then, right down here. Three little craters right -
	CDR	Watch your clock, Ron. Okay, Jack; 10 seconds for the PAN CAMERA.
	LMP	Okay.

[redacted]

	CDR	2, 1 - MARK. OPERATE.
03 16 10 33	LMP	OPERATE.
	CDR	Okay. IMAGE MOTION, INCREASE, barber pole - -
	LMP	Okay.
	CDR	- - plus four steps, and then ON.
03 16 10 47	LMP	Okay. Barber pole. 1, 2, 3, 4.
	CDR	Okay, Ron. You're still in f/2.8. Right?
	CMP	f/2.8. Yes, and I'm - -
	CDR	Okay. I'll try and give you a mark on time when you should be hitting - coming up on Doppler.
	CMP	Yes, we all got a window now. Figure out where I am. Let's see, I don't know which one - which is easier.
03 16 11 22	CDR	This is Doppler right here in front of you.
	CMP	Doppler, right there, huh? Right here in front of me.
	CDR	Yes, I'm looking right at it. That's Doppler. Yes, sir. Before you - you understand f/2.8 - when you come up on it, you want to go to f/4. That should be about another minutes and a half. Yes, this is Dopp - you looking at the same thing I am?
	CMP	... That's Doppler right there?
	CDR	Yes, it's at the - the - the two craters on the right-hand side over there.
	CMP	Yes. Okay.
03 16 11 55	CDR	Okay, just before you get to it, there's a little crater. See this little crater at the left of it here at - as you look at it, at 7 o'clock?
	CMP	Yes.

[redacted]

CDR Well, that's the crater he's got marked to come up on f-point - f/4.

CMP f/4. Okay.

LMP What am I - -

CDR Pardon?

LMP Can you give me a fix on what's south?

CDR What is south? Okay. Maybe it's on this. Here, I'll use this. Not a heck of a lot, Jack. Looking up to the left, you ought to have - -

LMP No, I just need a - -

CDR - - Sniadeck; and Mohorovicic - vici - Mohoro-vicic. They ought to be coming up, Ra - De Vries - McKellar, De Vries, and Racah.

03 16 12 37 CDR Okay, Ron. You ought to be about f/4, I'd say.

CMP Okay.

CDR And the time looks good.

CMP Time looks good. Okay.

CDR And about a couple of minutes - Is that thing clicking for you?

CMP Yes, okay. Yes.

CDR Look at that rille running right up towards Crookes, I guess, huh?

CMP Yes, it's going right up towards Crookes.

CDR Yes. Crookes has got that little breached side. See it right over here?

CMP Yes.

CDR Look at the steepness of the sides of that crater! From here, they - on the far side, the shadowed side, they look like 60 or 70 degrees.

[redacted]

	CMP	Oh, that son of a gun.
	CDR	Just yell when you need to get over here, Ron.
	CMP	Okay.
	CDR	Okay. It still calls for you to be at this window, Ron. Jack, at about 90 - at about 58, we want to put V/H to LOW.
	LMP	58.
	CDR	Yes.
03 16 13 34	LMP	Okay, 5 minutes.
	CMP	What? Do we change at Crookes?
	CDR	Keep going until you pass Crookes.
	CMP	Past Crookes and then 560.
	CDR	Yes, you're looking at Crookes, aren't you?
	CMP	Yes.
	CDR	The one with the breached crater on this side?
	CMP	Yes. It's got a breached crater on the side of it?
	CDR	Yes.
	CMP	Looks like somebody's walked up to it. An alligator.
	CDR	Yes. Right over all those other craters?
	CMP	Yes, walked right over all those other craters, and - -
	LMP	Boy, I'll tell you, they - some slopes on that thing really look steep.
03 16 14 01	CDR	Jack, on your side, you ought to have McKellar coming up there in the foreground a ways. It's - it's pretty subtle on that side, isn't it?

[redacted]

	LMP	Yes, but I tell you, there's fill in these craters. They're so smooth, I can't believe it.
	CDR	It really is smooth.
	LMP	And then there's some that - slight wavy and rough, too. Got some of these (cough) have the - -
	CDR	Okay, Ron - -
	LMP	- - whorls - -
	CDR	- - at about - What time is it?
	LMP	- - over here, window 5, that - -
	CMP	Oh, it's 54.
	LMP	- - ... indications of craters - -
03 16 14 43	CDR	- - Okay, just as you go past Crookes, you can go to 5.6.
	LMP	- - no indications of relief. And they cross - -
	CMP	Okay.
	LMP	- - crater borders, although generally the ones I - well, not - generally they're in the plains - -
	CMP	Excuse me. I ... here.
	LMP	- - material. Smooth plains.
	CDR	Looks like there've been a lot of one-legged chickens running around, all in the same direction.
	LMP	Locally, some of the depressions are extremely smooth - -
03 16 15 11	CDR	Ron, you want to hold 5 - 5.6 now - -
	LMP	- - light plains material.
	CMP	Yes.
	CDR	- - and you want to go to number 4, window number 4.

[redacted]

CMP Window number 4?

CDR Yes.

LMP Okay, here's one that looks like that hummocky material that's spilled over into another crater - -

CDR Window number 4, and you want to be on 5.6 but - until you get past Icarus.

CMP Icarus? I don't know which one Icarus is.

CDR Well, how about that big one out there, in - with the - Is that a - a very symmetrical pyramid mountain out there? Isn't that Icarus? Huh?

LMP I would guess that that is Icarus.

CDR I would guess.

LMP That is Icarus.

CDR I don't know whether you can see it out your window or not. You see that very pyramidlike central peak? Over here, Ron.

CMP I got one. I've got everything - -

CDR This way. Look at that. That's Icarus because here's - -

CMP Darn it. Everything went hopping back the other way. (Laughter)

CDR Oh, you want to stay - are you - -

CMP I'm still at window - -

03 16 16 33 CDR Okay. And f/8 is about - you want to stay - stay at 5.6. Right?

CMP Yes.

CDR Okay. Stay at 5.6, and you should be in window 4.

[redacted]

	LMP	Okay. Here's one of those cone-shaped craters with what looks very much like fill in the bottom. Doesn't look like slump at all. It just looks like the thing's filled up from the bottom up to oh, about a sixth of its depth. Little - few low hummocks but generally very smooth material on the bottom.
03 16 17 16	CDR	Ron, I'd say that's Daedalus over there.
	LMP	Could be debris flow off the - -
	CMP	Is it? Daedalus?
	CDR	Yes. Right out here? That's Daedalus. Okay. You can - let's see - you can start thinking about, in the next minute, going to f/8.
	CMP	Okay.
	CDR	Yes, that's Daedalus over there.
	CMP	That's Daedalus we're coming up on?
	CDR	Right out over there - that big one with the very - Looks like it's draped over with - -
	LMP	Hey, you ready for me on LOW ALT - LOW ALTITUDE at - -
	CDR	Yes, any time.
	LMP	Okay.
03 16 17 52	LMP	MARK it. LOW ALTITUDE. What's my next one, Gene? You got anything?
	CDR	Okay. Let me turn the page. Okay. Noth - nothing for about 10 or 12 minutes. We'll stop the PAN CAMERA.
	LMP	Okay. What's - -
	CDR	Don't let me forget that.
	LMP	- - What large crater is due south of us, Gene? Do you have that on your map?

[redacted]

	CDR	Well, how about De Vries? Will you buy that?
	LMP	Very large basin, yes.
	CDR	Or Racah?
	LMP	Yes, well - -
	CDR	Or Ingenii - Ingen - -
	LMP	Out on the horizon?
	CMP	Way out on the horizon is Ingenii.
	CDR	Well, let's see - I don't have that on here. It's blocked out, I guess, by overprint. Ron, you can go to f/8 - -
03 16 18 43	CMP	f/8. Okay.
	CDR	- - And then come back to the center window.
	LMP	Yes, that's Daedalus right there, Ron. I know that. The one I'm looking at here.
	CDR	Can't tell which one's - -
	LMP	That's - that's Daedalus over here. See - -
	CDR	But you know, when we look out different windows, it's hard to tell whether - -
	CMP	Yes, it's hard to tell. Right.
	CDR	- - you're seeing the same thing. Okay. Well, we went right by Icarus and Daedalus, and the next big thing - -
	LMP	Here's Gagarin, I think. No.
	CDR	- - that I've got coming up, we go - We're darn near Heaviside and Keeler.
	CMP	Heaviside and Keeler up there. I can see those, now.
	CDR	Can you see those coming? Okay. Well they're - -

[redacted]

	CMP	Yes, we're already past them.
	CDR	And Jack should have Aitken on his side, darn near below us, though.
	CMP	Well, there's a good scarp, soft scarp that's south of Keeler - Heaviside, I mean.
	CDR	Okay, now. See, I'm looking the wrong way to see Heaviside and Keeler. Where are you looking?
	CMP	It's right over that way. See those big things other there?
03 16 19 57	LMP	Okay, this is Aitken. Got Aitken.
	CMP	You got Aitken?
	LMP	Tallyho on Aitken.
	CMP	Okay.
	LMP	And it's got those crazy little double-rimmed craters with the dom - domical floors in it.
	CDR	Oh, Ron. Heaviside's coming up right over here.
	CMP	Gosh, Heaviside - -
	LMP	It's got - -
	CMP	- - ... What the heck is that way?
	LMP	- - massive rings - -
	CDR	That's - that's Heaviside, right there - -
	LMP	- - massive bench would be a better term - -
	CDR	- - to the left. See it?
	LMP	- - on the crater - -
	CMP	... that's Gagarin.
	LMP	- - near the south rim - -

[redacted]

	CDR	Gagarin.
	LMP	- - ... be coming up pretty soon.
	CMP	That'll be Gagarin right underneath us.
	CDR	Well, I don't even have it on this thing. It's not even listed on your chart. Let's see, at 91 hours - Where did the Flight Plan go?
	LMP	I got it.
	CMP	Okay; f/8's still good?
	LMP	Do you need it?
	CDR	Well, I just want to see what - well, here.
	CMP	f/8's still good?
03 16 20 48	CDR	Yes, f/8 is still good.
	LMP	Okay. Aitken has some of the swirl structure in it. It looks like it had - wait a minute - Yes, this is Aitken. It - Again, there is just no clear evidence of relief. Now, in the floor, there's a central peak but there's also looks like a hint of - -
	CDR	These two craters right here - -
	LMP	- - an inner rim.
	CDR	- - are Heaviside and Keeler. These two big, big basins, back to back.
	CMP	Oh, okay.
	LMP	... ring and - -
	CMP	Those two things up there are Heaviside and - -
	CDR	Yes, sir.
	LMP	- - Some of the linear trends of that - -
	CDR	Right here. See this little - -

[redacted]

	LMP	- - swirl coloration - -
	CMP	... to the north of that.
	CDR	... north of these - -
	LMP	- - associated with - -
	CMP	Yes. ... these other two things that I just took a picture of. That must have been Ic - no, it was back this way.
	CDR	Well, Icarus - -
	CMP	That was Daedalus.
	CDR	- - and Daedalus - Yes, that was - Yes, I could see it before you could.
	CMP	Okay.
03 16 21 43	CDR	So I might be a little bit ahead of you, because I can see these things before you could, but you're coming up on - on Heaviside and - and Keeler now.
	CMP	Keeler. Right here.
03 16 21 53	LMP	Here's a good example of a crater hitting the wall, guys, where the material apparently slumped down into it, and it's now a - has a linear bottom rather than a cone bottom. You get the impression that this part back here has been powdered almost everywhere except - -
	CDR	Yes.
	LMP	- - the new, fresh, ... white craters. You know, every crater has somewhat a different kind of textured floor. A lot - There are lot of different textures. Here's one where it's sort of a wiggly hummock texture that has a - a depression around the edge of it - around the edge of the floor next to the wall. Then the one right down there is - is so extremely smooth, there's no texture to it at all.
	CDR	Well, except for all those that are obviously new which get - Some of them get quite big.

[redacted]

	CMP	I'm still - -
	CDR	They all look like they're powdered over.
	CMP	- - f/8, huh?
	CDR	Yes, still f/8. You know, Jack, looking at that one, you get a - you're looking at a whole different world than I am, ... so - -
03 16 22 56	LMP	Oh, okay. There's Gagarin.
	CDR	- - you got Gagarin now. We're coming right over the top of Heaviside - -
	LMP	No, wait a minute. That's not ... - -
	CDR	- - Heaviside and Keeler - -
	LMP	- - ... over ...
	CDR	- - Right now - right now, we're right over the top of Heaviside, right smack over the top. And right here - -
	CMP	I don't see it.
	CDR	- - with the central peak and with the crater - -
	CMP	What's - -
	CDR	- - on the eastern - -
	CMP	- - What's north of Heaviside?
	CDR	What's what?
	CMP	North of Heaviside.
	CDR	North?
	CMP	It should be just - -
	CDR	Stratton and Dewar up here.
	CMP	Stratton and Dewar?
	CDR	That's what you're looking at right there.

[redacted]

	CMP	Yes, that's what I'm looking at.
03 16 23 22	LMP	That crater in Keeler there is the one that Jim Lovell used as the landmark track, down on the north rim.
	CDR	Okay, Ron. You're looking at Stratton and Dewar, and we're right over Heaviside. We're coming to - right over Keeler, right over that eastern crater in Keeler, and then right over the central peak. And what time is it?
	CMP	...
	CDR	03? Okay. About another minute or so, we'll try and get you to f/11 if I can find out - -
	CMP	Get to f/11 when I pass Kee - -
	CDR	Pass Keeler.
	CMP	- - pass Keeler, we'll go to f - f/11. Okay.
	CMP	Now, that's kind of messed up because, heck, it took me a half a pass to figure out which way we're going.
	CDR	Well, that's right and you're looking - -
	CMP	And - -
	CDR	- - you're looking in one direction, and I'm looking - -
	CMP	- - at everything in another.
	CDR	So what I see coming, you see - not here yet.
	CMP	Yes.
03 16 24 17	CDR	In the - in the central peak in Keeler, you can see some ridges right across the top of the mountainous ridge that are running in a - lineations running in a east-west trend. See that, Jack?
	LMP	Yes. They look a little darker.

[redacted]

	CDR	Yes, they got - -
	LMP	... variety would be an overhang there.
	CDR	- - light and dark and then a shallow - -
	LMP	It looks like the western side of that - of that central peak just cracks right off.
	CDR	Okay, Ron. You're looking up - let's see, Keeler - you're looking - I'm looking up ahead towards - I don't know whether that's Champlin or not. Is it? No.
	CMP	Chaplygin. Chaplygin.
	CDR	Chaplygin. No, I'm not - -
	CMP	It's got to be somewhere.
	CDR	Yes, but I'm not looking - Oh, it's up there. I see it. It's down there farther.
03 16 25 07	LMP	There's a population of elongate craters - looks something like the highland version of your SEA [?]. Every once in a while, you see those kind of craters.
	CMP	Yes.
	LMP	You know that - -
	CMP	What does - what does Chaplygin look like?
	LMP	Chaplygin - -
	CMP	Is that one down inside of it?
	CDR	Yes, there's a couple down on the south side, and there's a central peak, and there's some - some linear breaching on the north side, Ron. And then, don't forget the star Chaplygin. You know, Jack, that - -
	CMP	I can't see them.

[redacted]

	CDR	- - those lineations in the central peak of Keeler look like what they might have been looking for at Copernicus.
	LMP	Yes.
03 16 25 43	CDR	Oh, there's the star Chaplygin, Ron. See it? Out here?
	CMP	I - I don't see it yet, but - -
	CDR	Yes. Oh, it's beautiful! Right on the - right on the - on the northern - Ron, let me get my ... - -
	CMP	Oh, yes.
	CDR	See it?
	CMP	Okay, I see it coming up there.
	CDR	Oh, man, beautiful.
	CMP	That's Chaplygin?
	CDR	Yes, that's Chaplygin.
	CMP	Oh, okay. The star Chaplygin, okay, is on the north - -
	CDR	Yes, it's on the north of whatever it is.
	CMP	- - Yes, northeast corner. Whatever.
	CDR	We're on the back side looking the other way on that - -
	CMP	Oh, shoot. I don't see the ... yet.
03 16 26 16	CDR	Man, the star looks - is just a very dense white halo within about a - looks like a half a crater diameter. And inside, you can see very dark masses streaked by very light masses in a - in a radial downward direction.
	CMP	Yes.

[redacted]

CDR It looks like the majority of that - of that ejecta may have gotten diluted as it rolled down the slopes of Chaplygin. I didn't give you f/11 yet, did I? You can go there if you're not.

CMP No. We aren't missing anything ... - -

CDR Are you f/11?

CMP - - SIM bay, are we?

CDR PAN CAMERA, STOP. Yes, wait - Oh, wait a minute. Let me get the time here. We're not there yet.

CMP About what time? When does it stop?

CDR At 10:57.

CMP 10 - Oh, 07:17?

CDR Yes, 10:57.

LMP Should be seeing Gagarin here off to the - south pretty soon.

CMP Yes, there's Gagarin. And -

CDR Well, you can see to the south. See, I can't. I can't see to the south.

03 16 27 38 LMP Okay. I can't see Gagarin, no. What's this, Chap - Chaplygin here - with the - -

CMP Star Chaplygin.

LMP - - looking out - -

CDR Yes, right here. We're coming right over here with the small central peak and star on the north - upper right-hand corner. Look at the in - innards of that crater, Jack, of the star.

LMP Yes.

CDR Sort of - -

LMP I can't - I can't - -

[redacted]

	CDR	- - ... center ray.
	LMP	- - see it yet.
	CDR	Huh?
03 16 28 05	LMP	I just lost it.
	CDR	Did you?
	LMP	I didn't get a real good view of it.
	CDR	The inside - -
	CMP	Here, you can see it right out through here.
	CDR	- - looks like it's very dark - -
	CMP	See it ...
	CDR	- - ... at the bottom, dominated by - by white up until about the upper 10 percent. And then on the interior of that upper 10 percent is black again. And as you come out over the top, the ejecta is all very light colored.
	LMP	Okay. We're right over Chaplygin.
	CDR	Okay. At - what did I say - 10:57, you got 2 more minutes, Jack, on the PAN CAMERA.
	LMP	Okay.
	CMP	Don't I stop there at the lovelet? Doesn't look like the lovelet to me.
	CDR	Star Chaplygin - I don't know what you're talking about. What lovelet?
	CMP	The next thing up there, there's a - there's a stop at - -
	CDR	Oh, right here?
	CMP	Yes.
	CDR	It looks like a kidney?

[redacted]

	CMP	Yes.
	CDR	Well, let me see if I can see it. Yes, that's where you stop - Oh, there it is.
	CMP	I don't see it yet, but - -
	CDR	Well, I do. It doesn't look like what you're thinking of. Looks like - -
	CMP	Doesn't look like a lovelet to me, does it?
	CDR	What's a lovelet?
03 16 29 10	CMP	Well, I thought it had some stuff on the crater floors, but I sure don't see it. Oh, there it is! Yes, I got it right here.
	CDR	Yes, okay.
	CMP	See it?
	CDR	There's some very old subtle depressions that were craters that have got turtleback fill - -
	CMP	Yes, turtleback fills on it.
	CDR	- - which is very much; texturewise, except for the cracking, like the rest of the hummocky area. Okay. You got the lovelet?
	CMP	Yes.
	CDR	Man, my neck is going to break.
	CMP	Mine, too. That's (laughter) - -
	CDR	I think that's where you stop, isn't it?
	CMP	That's where I stop, I think, isn't it?
03 16 29 45	CDR	Jack, you got another minute on the PAN CAMERA.
	LMP	Okay. I got a clock going there. Yes. Yes, there seem to be - at least two crater-filling episodes, one of a very smooth material that seems to be older and more cratered. And then there's this

[redacted]

turtleback and varieties of that that you see in isolated craters around the - along the track.

CDR Jack, you want to get ready on that PAN CAMERA? Ron, are you done?

CMP Yes, I ... - -

CDR You want to record the frame number.

CMP Okay - -

LMP PAN CAMERA.

CDR Stand by. I'll give you a mark.

LMP Yes, to what? To - -

CDR You - you'll want it to standby.

LMP Okay.

CDR Thirty seconds.

LMP All right.

CDR Let's see, what am I - What's this huge basin I'm looking at right here to the north?

CMP That should be Becvar.

CDR That's this basin here. What the heck is that?

LMP That it, Gene?

CDR Mendeleev, isn't it?

LMP Gene?

CDR Stand by -

03 16 30 58 CDR MARK it.

LMP Okay.

CDR Right on time. Okay. V/H to HIGH ALTITUDE.

03 16 31 05 LMP Okay. It's going to HIGH.

[redacted]

CDR Next thing, in 5 minutes is the laser altimeter.

LMP What are we going to do with it?

CDR We're going to turn it off, and then we're going to - turn - retrack the mapping camera and close some covers.

LMP Okay.

CDR That was the PAN CAMERA you went to STANDBY on?

LMP Yes, sir.

CDR Okay. What is this? Mendeleev, isn't it?

LMP I believe ... - You should recognize it by having that long linear - -

CDR Yes, but I can't see it now.

LMP - - crater chain.

CDR Oh, there it comes across. Yes, I'll - -

LMP Yes. That's it.

CDR - - be able to see it when I get - -

LMP Yes.

CDR - - in line with it. That's it. It's got the - sort of an off-center, traveling central peak.

CDR Yes, that crater chain - what - goes almost north and south.

LMP Yes, very linear.

CDR And, boy, is that - -

LMP Extremely linear.

CDR - - is that pronounced.

CDR I wonder if the Rover would get up those walls? I doubt it. There's some breaches, though, in those walls that the Rover could get through.

[redacted]

	LMP	Yes.
	CDR	But I'll bet they look much bigger when you get down there.
	LMP	They're not nearly as smooth a floor as Korolev seemed to have in detail. Seems to have not only more craters but more hummocks.
03 16 32 36	CDR	We're right here, Ron.
	CMP	Yes, I know. Right here.
	CDR	... through there.
	CMP	Okay. The next thing is - -
	LMP	I got a clock going on that altimeter.
	CMP	Okay. LASER ALTIMETER goes OFF at 16.
	LMP	And there was a possibility of an east-west ridge - -
	CMP	Where is Mendeleev?
	LMP	Mendeleev - -
	CDR	Right here, Ron.
	CMP	I don't see it.
	CDR	Right here.
	CMP	Not at this Sun angle. I don't see it yet. Okay.
	CDR	Right here. It's this way.
	CMP	There?
	CDR	Yes. This way.
03 16 33 10	CMP	We're supposed to have those big - Oh, there it goes. Yes, out over here. Yes. Okay. There it goes. Boy, I tell you, it sure helps to have - -

[redacted]

	CDR	And the next two craters we're coming over are Hartmann and Green. Green has got that nice symmetrical central peak with the sloped sides, and Hartmann has got a sort of hummocky turtle-back. You don't see the cracks - -
	CMP	Yes.
	CDR	- - but you see the blisters in its - -
	CMP	That's Hartmann, okay.
	CDR	- - that's Hartmann, and you see the blisters in it's floor, and you really don't see the sloping either.
03 16 33 38	CMP	Yes, what's that one that has the slumping down there south of - of Green?
	CDR	Green? South? Right here?
	CMP	Yes.
	CDR	Look - looks like the bottom has been boiled up?
	CMP	Yes, looks like - -
	CDR	Like the whole side - freshly slumped - -
	CMP	Yes.
	CDR	- - and the bottom is boiling molasses or something?
	CMP	Right.
	CDR	That's nothing. I can't - I don't have it on this chart.
	CMP	That's ... up there, huh?
	CDR	But it's right under the number 13 where it says rev 13.
	CMP	Yes.
03 16 34 04	CDR	This is where you get your back sore.
	CMP	Yes, yes, it is!

[redacted]

LMP Man, you're right (laughter).

CMP It's like - like Anders said, this is a heck of a - -

LMP Okay, this - I - -

CMP - - proposition, by the way.

LMP - - don't know which one it is, but one of those to the right - Oh, we're just about over it right not - maybe just a little north of our track - is generally bright walled, although the southwest wall not only has an arcuate slump cut apparently, but it's darker, and it's darker not only in the inner wall but it's also in the ejecta blanket outward. You see that, Ron?

CMP Yes, it is. It's darker on the ejecta and the blanket going back toward - to the east.

LMP Yes. Yes. Is that east - -

CMP Yes.

LMP - - or west? Is it?

CMP Well, we're going east. We're - -

LMP We're going west.

CMP Okay.

LMP Okay; yes, east. I'm sorry; southeast.

CDR Hey, do you see that one where you see very steep fresh walls way out there, almost on the horizon? Oh, we're going over a big long -

CMP Yes, we - -

03 16 35 04 CDR What is that? Do you have any idea? Big long chain?

LMP Yes, we're going over - -

CDR - - crater chain. Not that one. And in this case it is - -

[redacted]

LMP Look at that.

CDR - - made up of cone-shaped - -

LMP I would say it might be - -

CDR - - craters that are - -

LMP - - en eschelon with apparent right laterals.

CDR - - ... I thought at ... you were supposed to go to the horizon.

LMP It's trending north-south - -

CDR Ron?

CMP What?

CDR Thought you were supposed to go to the horizon.

LMP - - at the northwest-southeast - -

CMP No, ... doesn't.

LMP - - and the spoon is consistently to the south.

CDR Here's King coming up.

CMP Where? I'd like to take a look at that.

CDR I got a good view of what's in front of us right by the LM. Here, you can - you - Take a look at King from this angle, Ron. Get back here to the - -

CMP I can see the - -

CDR - - Look right along the LM - LM tanks. See it?

CMP Oh, okay. It's just now coming up. Okay.

CDR Yes.

CMP With the Y central peak on it.

CDR Yes.

CMP Okay, okay. Okay, I don't - -

[redacted]

	CDR	I'll give you a hack when you ought to be able to pick that out. It's got - Yes, it's got a - a varied central peak - -
03 16 36 12	CMP	Yes, it's a Y-shaped central peak is the ... - -
	CDR	Okay. It is. And the Y is pointing up to the - What? Northwest.
	CMP	Okay. There's 16. That's LASER ALTIMETER, OFF. and MAPPING CAMERA to RETRACT.
03 16 36 27	LMP	Okay. LASER ALTIMETER is OFF and going just to RETRACT - -
	CMP	RETRACT on the MAPPING - -
03 16 36 32	LMP	Okay. Barber pole.
	CMP	Okay. Let me - -
	LMP	Couple minutes and we'll look at it.
	CMP	Okay, and then IR COVER to CLOSE.
03 16 36 41	LMP	IR to CLOSE.
	CMP	UV to - UV COVER, CLOSED?
03 16 36 49	LMP	IR is CLOSED - -
	CDR	The ray - -
03 16 36 52	LMP	- - UV is CLOSED.
	CDR	The ray's from Giordano Bruno - -
	CMP	Okay, and I got ...
	CDR	- - that seem to breach King - -
	LMP	What else, Ron?
03 16 37 00	CMP	PAN CAMERA to OPERATE at 18:05. It's 17:05 now. Coming down.

[redacted]

CDR I can't really see where the ray emanates from, but it's very obvious to me that there's not only an albedo change as you approach King in the direction of that ray - or from the direction of that ray, which, by the way, is into the opening of the Y in the central peak, but that as you hit the rim, there is a definite - -

CMP Okay. There's going to be a ... - -

CDR - - wide area of albedo change to a lighter color. And in the center - -

CMP - - I mean I was looking at the ... - -

CDR - - of this light color down the slump slopes - -

CMP Have you retracted yet?

CDR - - of King, you have a very - well, not a ... but a darker - much darker area.

LMP No.

CDR What do you want, Ron.

CMP ... 15, when the mapping camera retracts.

LMP What shall I do? Turn it off?

03 16 37 42 CMP No, no, just leave it there, but I'd just like to know when it is.

CDR And on the ray from Giordano Bruno - -

CMP How long it takes.

CDR - - you have sort of a smooth-type surface - -

CMP ... before.

CDR - - Looks like it's much dustier, if you will, in that direction as it approaches King than the - -

CMP Okay; 5 - 5 seconds to PAN CAMERA - -

CDR - - area outside the ray.

[redacted]

	CMP	- - OPERATE. Okay. PAN CAMERA to OPERATE now.
03 16 38 09	LMP	MARK. It's operating.
	CMP	It started at 09. That's at ... - -
	CDR	And as you look up the horizon from King out that ray, you get a - -
	CMP	It's a minute and 45 right about now.
	CDR	- - ... hint of a - this continuous, darker - -
	CMP	... set it over ... - -
	CDR	- - surface within the ray geometry.
	LMP	Now what?
	CMP	Okay. PAN CAMERA to STANDBY at 27 is the next thing for you. 27:43.
	LMP	Okay.
	CDR	It seems to go - -
	LMP	Nine minutes.
	CMP	Okay. You can enable JETs A-4.
	LMP	Okay.
	CDR	Oh, man, you got to look at that - at that - that - that albedo change, almost like a flow coming down the walls of - What is it? Guyot?
	CMP	Guyot. Yes.
	CDR	Guyot? Right at us. Do you see it?
	CMP	And they're - straight down here, is it?
	CDR	Yes, you see Guyot?
	CMP	Yes.
	CDR	But you see that albedo change?

[redacted]

	CMP	Oh, that's - that's - okay. That's Lobachevsky on over there.
	CDR	No. No.
	CMP	Yes, it is.
	CDR	Not what I'm looking at.
	CMP	The one looking straight ahead there.
	CDR	No, I'm looking over here. I'm looking right over here.
	LMP	Okay. Here's our sandy, light gray rims.
	CDR	Okay. What do you want on these - on the - -
	CMP	Okay. Enable A-4.
03 16 39 29	CDR	I can't find A-4. My eyeballs are shot. A-4, enabled.
	CMP	C-3.
	LMP	Can I use that camera at all?
	CDR	C-3?
	CMP	And B-4.
	CDR	B-4?
	CMP	Yes, you can use it.
	CDR	And what?
	CMP	And D-3.
	CDR	Okay. What do you want disabled?
	CMP	Disable jets A-1 and C-2.
06 06 39 45	CDR	A-1 and C-2, okay. A/C ROLL is OFF.
	CMP	And enable jet C-1. Enable C-1.

[redacted]

CDR C-1.

CMP Okay.

CDR Okay. You got all your roll jets off except C-1.

CMP Yes, I know. I know.

CDR This is a ... - -

CMP Which is a minus roll. Okay. Enable B-2 and D-2.

CDR Enable B-2?

CMP Yes, Bravo 2 and Delta 2.

CDR Okay.

CMP And that's in case we get off attitude.

CDR Okay.

CMP Now, get me a VERB 6 - 62 on - -

CDR Are we subsolar yet?

CMP - - ... to ... pretty clever.

LMP Did you pick up the rest of this stuff in the Flight Plan?

CMP Yes, we got everything. Yes, substellar - subsolar's about now.

CDR Okay.

03 16 40 31 CDR Okay, Ron. Now we're coming over Lobachevsky, right now. Right here.

CMP Yes.

CDR I - I was looking at Guyot.

CMP That's mag 00, frame something or other - whenever you get through there.

CDR Guyot.

[redacted]

	CMP	Acquire MSFN in OMNI D. Okay. We'll ... Let me know when you're through taking pictures there.
	LMP	Okay.
	CMP	What frame?
03 16 41 08	LMP	Frame 66. That's a really strange - those are very light gray areas that are around the rims of craters. Looks like it might be related to that swirl.
	CDR	Boy, that looks - You know, where you see some of these slumped areas where it looks like there's an albedo change over the rim of the crater, so many places you see a - what appears to be a small but massive - looking black area like right here on - on Lobachevsky.
	LMP	There's just - just black fill rolling over the slope of the - -
	CMP	Did you get that ... of Lobachevsky?
	LMP	- - wall of the crater. Yes. I wouldn't be surprised if that's all glass, Geno.
	CDR	Might very well be.
	LMP	Because craters that have big ray patterns - they also generate a lot more glass than usual. These higher energy impacts.
	CDR	Okay, are we about - -
	LMP	Frame 67 was Lobachevsky on mag 00.
	CDR	Oh, let's see. AOS is at 24. ... What do they want? Did we get all this, Ron?
	CMP	Yes, I got that.
	CDR	Disable A/C - -
	CMP	Okay. I got - got 10 degrees out here. Let me give us a call.
03 16 42 37	CMP	MAPPING CAMERA, RETRACT. The talkback was gray.

[redacted]

	CDR	Have we got everything done?
	CMP	Got everything done as far as - -
	CDR	You get all these things here?
	CMP	Yes, we did that.
	CDR	You get the T-start again?
	CMP	Yes.
	CDR	Okay.
	CMP	T-start is 18:07 or so. That's good.
	CDR	Okay. Did you get the MAPPING CAMERA, RETRACT, and everything?
	CMP	Yes, I did.
	CDR	Okay. This is all done. OMNI Delta then?
03 16 43 09	CMP	Okay. We're in OMNI Delta.
	CDR	27:43, we want to stop the pan camera again.
	CDR	There's a ... one down there.
	LMP	Some of that dark stuff just looks like blocks.
	CMP	Yes. Think I can finally - Look it, this thing's upside down (laughter).
	CDR	Well, you got to know which way you're going and which way you're pointing. That's the big problem.
	SC	(Cough)
	CDR	I got the feeling that someone's brought a big powder puff and powdered the whole back side, because - -
	CMP	... water.

[redacted]

	LMP	Here's one - here's one off to the south that has - has three albedo contrasts. Looks very much like what you just described except it has one more - one more in there - -
03 16 44 33	CMP	Okay, Houston. We're with you in OMNI Delta.
03 16 44 38	LMP	- - that is much darker than the others -

# # #

[redacted]

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(This page Unclassified)

Tape 17-03405

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 1

Time Segments (AET)

From	To
03 18 10 49	03 18 25 17
03 18 25 28	03 18 33 44
03 18 33 48	03 18 54 58

Voice good; time good

SECURITY CLASSIFICATION

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[redacted]

03 18 10 49	CDR	... the burn. (yawn) Well, there comes the Sun up already? Probably. That'll be on our ... - -
	LMP	No. ... That's - Besides, it's out the other way.
	CDR	Yes. ... Right on the side of the LM. Look at it.
	LMP	Yes. Sun's behind it. ...
	CMP	Okay. The burn time is 22.1, bank A open. ... ... overburn it 2 seconds. That's a ...
	CMP	... sextant star check. Okay. P40 to 50 18, and bring that beauty behind.
	CDR	Okay. Check your breakers on panel 8 and your SPS breakers.
	CMP	DIRECT ULLAGE. ... right here.
	CMP	Okay, DIRECT ULLAGE -
	LMP	Oh, you've got that. Okay. I can put it in here.
	CDR	...
	CMP	PILOT VALVES; okay, they're all set.
	CDR	... you can pull a ..., but it feels like it.
	LMP	...
	CDR	Yes.
03 18 12 51	LMP	... like it?
	CDR	Yes. No, it's - it's not so bad. It just feels like I pulled a ... or something. EPS is doing nothing.
	LMP	... clear. ... the handle.
	CDR	Yes. Make sure that it's down good.
	LMP	...

[redacted]

	CDR	Okay. You got all your breakers - STAB CONTROL, panel 8? (Yawn) SPS, 12 CLOSED?
03 18 13 20	CMP	Okay. STAB CONTROL; they're all CLOSED. ...
	CDR	Okay. SPS, 12 CLOSED?
03 18 13 23	CMP	SPS are CLOSED.
	CDR	Okay. MANUAL ATT, three, RATE COMMAND?
03 18 13 26	CMP	Okay, we're RATE COMMAND.
	CDR	ATTITUDE DEAD BAND, MIN; RATE, LOW.
03 18 13 31	CMP	DEAD BAND, MIN; RATE to LOW.
	CDR	SCS TVC, two to RATE COMMAND.
03 18 13 35	CMP	TVCs in RATE COMMAND.
	CDR	CG switch, LM/CSM.
03 18 13 39	CMP	Okay. We're in LM/CSM.
	CDR	Okay. TVC GIMBAL DRIVE PITCH and YAW, AUTO.
03 18 13 45	CMP	PITCH and YAW's in AUTO.
	CDR	Okay. We'll stand by for about 6 or 7 minutes.
	CMP	Okay. Should be in good shape.
	CDR	Okay. If overburn is greater than 2.2 feet per second and less than 10. Well, first of all, if it's less than 2.2, we'll take it out - to 1 foot per second. See then we - If it's between 2.2 and 10, we'll pitch 180 and take it out with the plus-X thrusters.
	CMP	Okay.
	CDR	If it's greater than 10, we'll use the SPS.
03 18 14 18	CMP	Okay. 25, NOUN ... and the - -
	CDR	What are you doing?

[redacted]

03 18 14 26	CMP	Plus, ENTER, plus 228 - -
	CDR	Oh, NOUN ...
	CMP	- - from 180 is - 180 from that is what?
	CDR	48.
	CMP	From 228 is - 048.0, right?
	CDR	What attitude did you put in there?
	CMP	180 degrees.
	CDR	Oh.
	CMP	See, that's okay. Then call VERB ... and ... around. Could have loaded NOUN 22, I guess.
	CMP	What are we supposed to be in to acquire ground?
	CDR	See, you were supposed to be in an omni when you left it , so that has to be high gain, so how about OMNI Charlie?
	CMP	Okay. ... it in OMNI Charlie. No. Wait a minute. This says AOS.
	CDR	Yes, but that's where they - We didn't go to OMNI Charlie. We stayed in HIGH GAIN.
	CMP	Well, but AOS - We ... for the call ... change that.
	CDR	Yes.
	CMP	I'll change it. ... LOS to AOS.
	CDR	HIGH GAIN, plus 9 and 338.
	CMP	Okay. ... - -
	CDR	- - ... lock up in the high gain, go to OMNI Charlie.
03 18 16 24	CMP	Okay. Plus 9?

[redacted]

	CDR	Plus 9 and 338.
	CMP	That'll be MANUAL WIDE or -
	LMP	...
	CMP	...
	CDR	... Here it is, right here. Okay. VERB 49 to landmark observation attitude - or bailout attitude. Okay, set HIGH GAIN for plus 9 and plus 338, REACQ and NARROW for AOS.
	CMP	For AOS.
	CDR	Yes. NARROW for AOS.
03 18 17 08	CMP	REACQ and NARROW. Okay. ...
	CDR	We want to make sure we get things cleaned up tonight so we can go to bed on time, because tomorrow is one heck of a long day.
	CMP	Yes, it sure is.
	CDR	We want to get done eating, and get any other cleaning up we want to do or whatever else we want to do and get it out of the way because - -
	CMP	I think you guys may want to put your sensors on tonight, too.
	CDR	- - because sleeping time - Well, I'm going to leave mine on - sleeping time, we want to be ready to go to bed, either by then or before then ... at this point ... - -
	LMP	Is that - what's your -, ... go around in a strange attitude ...?
	CMP	Jack, have you got VHBW on that camera?
	LMP	No. You want VHB - -
	CMP	If you had one quick one, I'd start it at - what, f/4 at 1/250? Right at the terminator?
	LMP	Well, stand by 1.

[redacted]

	CMP	I'm sure. It's - pretty much black mare - in - in - Korolev there. I think that's Korolev.
	LMP	How am I doing here? Have I still got time?
03 18 19 03	CDR	You've got 12 minutes.
	LMP	No, I mean for Ron.
	CMP	Twelve minutes, Jack?
	LMP	No. Time for your picture.
	CMP	Yes. ...
	LMP	Okay, VHBW. You want - and the - What - what lens?
	CDR	That one won't be any good.
	LMP	Huh?
	CDR	Get the other.
	LMP	... Lit it?
	CDR	It won't be any good to get what you want, though.
	CMP	Yes, the 80, if you've got one. Otherwise, ...
	LMP	Well, I'll put it on.
	LMP	Here you go.
	CMP	Okay.
	LMP	The slide's pulled.
	CDR	You got it set with the slides pulled?
	LMP	No.
	CMP	Okay. ...
	LMP	Just a little beyond the terminator, I think.
	CDR	Well, let's see what ... here. ...

[redacted]

	CMP	No manual start; no restart.
	CDR	No.
03 18 21 08	CMP	Okay, G&N, do your stuff.
	CDR	...
	CMP	Four jets, 15 seconds, isn't it?
	LMP	Huh?
	CDR	Ullage. Ullage is four jets ...
	CMP	Four jets, 15 seconds. I think I'm going to have to ... these crazy things to make them work.
	CDR	Have you got DSE?
03 18 22 02	CMP	There's a couple of places of floating urine on the window.
03 18 22 33	CMP	That one right over there.
	LMP	What one? ... - -
	CDR	That's Galois, isn't it? That one right down there?
	LMP	...
	CDR	Korolev is - off to your left a little way. There.
03 18 22 55	CMP	Okay; 8-1/2 minutes.
03 18 23 26	CDR	Okay. Tight limits, ... over at 10 degrees a second, ... 10 degrees. That's the attitude deviation, plus or minus 10. Shutdown is burn time; that's the most critical thing. Trim X to within 1 foot per second. No manual start; no restart.
	CMP	Okay. We'll go 5, 4, 3, 2, 1, shutdown. Right?
	CDR	That's the ... burn time.
	LMP	Okay.

[redacted]

	CDR	Starting at 18?
	CMP	Yes.
	LMP	2 ... right?
	CDR	Starting it at 18.
	CMP	Right. 5, 4, 3, 2, 1.
	CDR	18, 19, 20, 21, 22. I'm going to start at 18. 5, 4, 3, 2, 1; that's 18, 19, 20, 21, 22. Because I don't want it to shut it down early; start on 18 to get your 5.
	LMP	Gene, it will be late.
	CMP	Late to give you ... shutdown. Start on 17: 5, 4, 3, 2, 1, shutdown.
	CDR	Oh, you're going to yell shutdown, I'm sorry.
	CMP	Yes.
	CDR	I'm sorry. Okay. You're right.
	LMP	I'm going to shut it - shut it down on ... - -
	CDR	Okay.
	LMP	- - ...
	CDR	Okay. MAIN BUS TIES, ON.
03 18 25 03	LMP	Okay. They're going on. A/C's ON, and it's good; B/C's ON, and it's good.
	CDR	Okay. TAPE RECORDER; HIGH BIT RATE, RECORD, FORWARD, COMMAND RESET.
03 18 25 17	LMP	Okay. HIGH BIT RATE, RECORD, FORWARD, COMMAND - -

TIME SKIP

[redacted]

03 18 25 28	CMP	... Check; it's good.
	CDR	Okay. SERVO POWER; AC 1/MAIN A?
03 18 25 31	CMP	Okay. AC 1 - -
	CDR	And AC 2/MAIN B.
03 18 25 33	CMP	- - 2. There they are.
	CDR	Okay. Let me get my ... ROT CONTROL POWER, two, to AC.
03 18 25 41	CMP	AC.
	CDR	DIRECTs OFF?
03 18 25 42	CMP	DIRECTs are OFF.
	CDR	Okay. BMAGs, 1/2.
03 18 25 46	CMP	BMAGs are uncaged.
	CDR	SPACECRAFT CONTROL, SCS.
03 18 25 50	CMP	Going over; says SCS.
	CDR	Okay. ROT CONTROL; two are ARMED.
03 18 25 55	CMP	Okay; ARMED.
	CDR	PITCH 1 and YAW 1.
	CMP	Okay, PITCH 1.
03 18 25 57	CMP	MARK it.
	CDR	Got it.
	CMP	YAW 1.
03 18 26 00	CMP	MARK it.
	CDR	Got it.
	CDR	Verify trim and set.

[redacted]

03 18 26 04	CMP	Okay, 1.9. And right there at a minus 0.6 ... 4.
	CDR	Minus 0.64, Ron.
	CMP	Minus 0.64? Thank you. Minus 0.64 - -
	CDR	Okay. Verify MTVC.
03 18 26 22	CMP	MTVC; MTVC. Okay.
	CDR	Okay. SPACECRAFT CONTROL, CMC.
03 18 26 27	CMP	CMC.
	CDR	Clockwise?
03 18 26 29	CMP	Returns to zero, Clockwise.
	CDR	No MTVC?
03 18 26 31	CMP	No MTVC.
	CDR	Okay, PITCH 2 - -
	CMP	PITCH 2.
	CDR	- - and YAW 2.
03 18 26 34	CMP	MARK it.
	CDR	Got it.
	CMP	YAW 2.
03 18 26 36	CMP	MARK it.
	CDR	Got it.
	CDR	Set GPI trim.
03 18 26 39	CMP	Okay. 1.9 - -
	CDR	1.9 plus.
03 18 26 42	CDR/CMP	And minus 0.64.
	CMP	Okay; it's ...

[redacted]

	CDR	Verify MTVC.
03 18 26 48	CMP	Minus, plus, plus, minus ... Okay. Try yours.
	CDR	Okay; mine's good.
	CMP	Okay.
	CDR	HAND CONTROLLER, NEUTRAL?
03 18 27 00	CMP	NEUTRAL; returns to - -
	CDR	Verify - -
	CMP	- - zero.
	CDR	- - no MTVC?
03 18 27 03	CMP	No MTVC.
	CDR	Okay. Verify returns to zero; it did.
	CMP	It did.
	CDR	ROT CONTROL POWER, two, AC to [sic] DC.
03 18 27 09	CMP	AC/DC.
	CDR	Okay. DIRECTs, MAIN A/MAIN B.
03 18 27 12	CMP	DIRECTs are MAIN A and MAIN B.
	CDR	Okay. BMAGs, RATE 2.
03 18 27 16	CMP	BMAGs are caged.
	CMP	...
	CDR	Okay. That's ...
	CMP	Okay. It looks like we're there.
	LMP	Looks like it liked you, didn't it?
	CMP	Yes. Try it one more time and see if you ...
	CDR	Yes.

[redacted]

	CMP	Okay. ... for ... control.
	CDR	Okay. You've got a half?
03 18 27 40	CMP	MAGs, 1/2.
	CDR	Okay. Ready for a gimbal drive?
	CMP	Okay.
03 18 27 48	CDR	Okay. PRO.
03 18 27 49	CMP	Plus, 2, minus 2, 0, plus 2, minus 2, 0. Ta - ta-tum-tum.
03 18 28 06	CMP	There's the trim.
	CDR	Saw it all over here. Plus 1.9 and minus 0.6.
03 18 28 12	CMP	Okay; 3 minutes to go.
	CDR	Okay. SCALE 5/1?
03 18 28 16	CMP	SCALE 5/1.
	CDR	RATE, HIGH.
03 18 28 20	CMP	RATE to HIGH.
	CDR	Okay. At 59, we go EMS, NORMAL.
03 18 28 25	CMP	Okay. Let's go EMS NORMAL in 30 seconds or so.
	CDR	Okay.
	CMP	TRANS CONTROL POWER - We go NORMAL, TRANS CONTROL POWER, and DELTA-V THRUST all at the same time in 30 seconds.
	CDR	Okay; and you want four-jet ullage at 15 seconds. You've got a four jet there, don't you?
	CMP	Ah - I think so. Yes. ... four - 946 - four jets. Okay.

[redacted]

	CDR	Think we'll be in in a 14 ...? Fourteen and a half miles; we is really going to be coming down among them; whoo.
	LMP	Fourteen and a half, huh?
	CDR	From 170 to 14-1/2.
	LMP	My gosh! Look at that hill there.
	CMP	(Chuckle) Looks ... again. Everything's backwards. There's a big chunk of stuff out there, rolling around. See it?
	CDR	Rolling around?
	CMP	Out the left window over here.
03 18 29 31	CDR	Two minutes.
	CMP	Two minutes.
	LMP	I really like this ...
	CMP	...
	CMP	... armed. All the switches. Good.
03 18 30 11	CDR	01:30.
	CMP	01:30.
	CDR	Okay. You'll shut down on Jack's burn time, regardless.
	CMP	Yes.
	CDR	Make sure you listen, so we - so you get the right lead.
	CMP	I will.
	CMP	Did you start your watch ...?
	CDR	Yes.
03 18 30 38	CDR	Okay; 1 minute.

[redacted]

	CMP	Okay.
	SC	(Whistling)
	CDR	Okay, ... 17 feet per second ... 2 seconds. Yes, should have ... seconds.
	CDR	Okay. DSKY blanks.
03 18 31 04	CMP	... EMS to NORMAL; TRANS CONTROL POWER, ON; DELTA-V THRUST A is ON.
	CDR	Okay, at 15 seconds, you can start thrusting.
	CMP	Okay.
	CDR	I'll get the PRO.
	CMP	You'll get the PRO.
03 18 31 22	CDR	16, 15 - Okay, there's ullage.
	CMP	Got the ullage coming?
	CDR	See it on EMS.
	CMP	Yes.
	CDR	See it on the DSKY.
	CMP	On the DSKY.
	CDR	7, 6, - 99 -
	CMP	Okay.
	CDR	3, 2 - -
	CMP/CDR	1 -
03 18 31 37	CDR	MARK it.
	LMP	Got it.
	CMP	Okay.

[redacted]

03 18 31 38	CDR	IGNITION.
	CMP	- - ... the thrusters? Pitch ... Looks good over here.
	CDR	Okay.
	CMP	Looks good. Okay, it's coming up - -
	LMP	Fifteen seconds to burn. Computer looks good, like it's going to be on. It says 10 to burn. I think computer's going to shut you down on time.
	LMP	Stand by.
03 18 31 59	LMP	Fa - SHUTDOWN. I'm sorry.
	CMP	Okay.
	CDR	That's all right. Computer shut you down. That's all right.
	CMP	Computer shut it down; that's all right.
	CDR	It was on time.
	LMP	I did this same darn thing in the simulator the other day.
	CMP	Okay.
	CDR	Okay.
	CMP/CDR	That's all right - -
	CMP	We had ... one time.
	CDR	22 seconds - -
	CMP	198.2.
	CDR	Let me - let me get them. It was right on time.
	CMP	Right on time.
	CDR	Good over here.

[redacted]

	CMP	Okay. PITCH 2, Jack?
	LMP	Go ahead.
03 18 32 20	CMP	MARK it.
	LMP	Got it.
	CMP	YAW 2.
03 18 32 22	CMP	MARK it.
	LMP	Got it.
	CMP	Okay, once.
03 18 32 25	CMP	MARK it.
	LMP	There's a zip. That was beautiful.
	CMP	... once.
03 18 32 28	CMP	MARK it.
	LMP	Got it; 0.1.
	CMP	Okay, let's see. It's just - picking up attitude again. All right.
03 18 32 42	CMP	Okay. DELTA-V THRUST - are OFF; GIMBAL MOTORS, OFF; SERVO POWER 1 and 2 is OFF. Okay, residuals - you got those? Okay, TRANS CONTROL, LOCKED; LOCKED. And let's see, DIRECTs are OFF. DIRECT ULLAGE circuit breakers, two are OPEN; PITCH 1; that one is OPEN; record the DELTA-V counter and the residuals.
	LMP	What was it? Plus or minus?
	CMP	Plus 0.1. And I - it went on at 30 seconds ...
03 18 33 27	CMP	Okay. EMS FUNCTION, OFF; ATTITUDE DEAD BAND to MAX; BMAGs caged. Okay, BUS TIES?
	LMP	Okay. Coming off.
	CMP	Okay.

[redacted]

03 18 33 40	LMP	There's one, OFF; two went OFF.
03 18 33 44	CMP	Okay; BIT RATE to LOW?

TIME SKIP

[redacted]

03 18 33 48	CMP	Gene?
	CDR	No, no. You delay that until - -
	CMP	Oh, that's - -
	CDR	- - 94:10.
	CMP	Oh. Okay. Delay that until 94:10.
	CMP	... look ...
	CDR	Okay.
	CMP	Okay. Let's see. You got a VERB 66?
	CDR	Yes. ... anyhow, it looks like. Okay. VERB 49. Go to 020.
03 18 34 13	CDR	Okay. Plus 20.00.
	LMP	Okay. And 293 and zero.
	CDR	...
	CMP	Okay. And then you got the ... DAP. 50 18 ... chamber pressure got up to 95 that time.
	CDR	Still got a bias there.
	CMP	Still got the bias, but - -
	CDR	It may have been a ...
	CMP	Yes. It's - -
	LMP	... bias.
	CMP	Yes.
03 18 34 42	LMP	Yes. It could have been ... Okay. Oxidizer is 30.5; fuel is 31.1. And I'm now 150 decrease.
	CDR	...
	LMP	That's right. ... Ox ...?

[redacted]

	CDR	Yes.
	LMP	... wondered - Okay, good. I was just wondering if we were in there.
	CDR	Yes. You know, it used to be - -
	LMP	- - ...
	CDR	It used to be the other way. It used to be the opposite of what he gave you.
	LMP	What he gave you. Yes.
	CDR	Somebody changed it ...
	CMP	That somebody is your CMP.
	LMP	Could be confusing.
	CMP	(Laughing) Yes, I guess it is.
	LMP	Okay. Let's see.
	CDR	I want to find out what kind of - -
	LMP	Get your landmark tracking.
	CDR	- - ... is.
	LMP	Set HIGH GAIN. Okay.
03 18 35 36	CDR	Okay. HIGH GAIN is plus 9 and plus 338, I guess.
	LMP	Okay.
	CMP	Okay.
	CDR	Okay, we'll pick up that SIM prep ... in about an hour, Jack, postburn SIM prep.
	LMP	Okay.
	CDR	Well, that should be about a couple of minutes.

[redacted]

CMP Gosh dang it, I wish those craters would turn around the other way.

LMP Okay. What else?

CDR Ron, go to - Well, when we pick it up, we've got our - the big thing is NOUN 89.

CMP Look at that big scarp going ... over there -

CDR P24. Hey, Ron.

CMP Huh?

CDR Put your switches in ACCEL. I want to call up VERB 82 in a minute. And then I'll switch you back over.

CMP Okay.

CMP 59.1 by 14.9. That'll be pretty close to what we figured, huh?

CDR Yes.

CMP Okay.

CDR Ready?

CMP ... 10 degrees ... I wish I could look out there and recognize a crater right off the bat, but I can't do that yet.

LMP Well, you're right over Chaplygin, I believe.

03 18 37 04 CMP Right over Chaplygin?

LMP Yes.

CDR Just passed it.

CMP We must be past it. I don't see it.

LMP No. It's down over there.

CMP Oh, there it is over there.

[redacted]

CDR There's those - turtle -

LMP Yes.

CMP Okay. There's the lovelets.

CDR - - ... Yes.

CMP There's the lovelets. Okay, so that's south of that - What's that big one south of the - the lovelets?

LMP That's got to be -

CMP Marconi. This is Marconi over here.

CDR I can't see too much from down under this -

LMP Marconi.

CMP What time do I have to do that landmark tracking?

LMP ...

CDR Yes, you -

LMP ...

CDR Load NOUN 89. What are the numbers for loading NOUN 89?

LMP Hand me your orbital chart - -

CMP It's ...

CDR ... NOUN 89 ...

CMP J-3.

CDR I have the numbers for J-3. ...

CDR Plus 9 - plus 19.948, plus 20.051, plus all balls.

CMP Okay.

CDR Okay.

[redacted]

	CMP	Maybe I'd better get some ... on ..., just in case.
	CDR	Oh heck, we've got - What'd I say? Nine - We're at 93:18. We've got a long time before AOS.
	CMP	Oh, yes, before AOS gets here.
	LMP	Yes. Marconi was the one ... - -
	CMP	Marconi is the one south of it.
	CDR	Yes?
	CMP	That's the one I ought to recognize because that's -
03 18 38 53	CMP	Okay. ... is norm, 1 frame per second, f/60. Let's see, it's pretty high Sun in here.
03 18 39 04	CDR	Pannekoek or something like that, isn't it?
	LMP	...
	CDR	And there's old Mendeleev.
	CMP	... screwed up the focus.
	CMP	Yes, there she is.
	CDR	The albedo changed on the inside of that crater right there, Jack. It's probably the same thing that gives the albedo change on - on the - this little one right here. The white albedo; it's probably the same albedo - type albedo change you get on the - on the - slide.
03 18 40 06	LMP	Yes. I don't know what produces it. You get this - -
	CDR	Well, even on the inside of all these walls - -
	LMP	- - this particular exposure, it just never darkens.
	CDR	See, you can - see it on all those walls. Any time there's movement, there's a darkening effect that has to do with - the sitting [?] - you know, the marnishing [?] or whatever you want to call it.

[redacted]

	CMP	Boy - have we got - a picture right there.
	CDR/LMP	Oh, yes.
	CMP	Get that.
	CDR	We are coming down, friend.
	LMP	... high. What the heck is that?
	CDR	The right attitude.
	LMP	The right attitude? What are we, about subsolar on there?
	CDR	Subsolar at - 27.
	LMP	About 5 minutes?
	CMP	Sure gets bright through this telescope.
	CDR	Did you hit ENTER?
	LMP	Yes, I hit ENTER.
	CDR	Okay, next thing around is - is, after AOS, burn report, and then NOUN 89. Let me doublecheck those.
03 18 41 34	CMP	19.948 and 20.051. Boy, it's going to be bright. Whew.
	CDR	Okay, and then - P24.
	CMP	Okay.
	CDR	Well, you're going to have - have to tell me how I can help you with that one.
	CMP	I just hope I can recognize Macrobius A and B. I think I can.
	CDR	Oh, yes.
	CMP	I had a good look - -

[redacted]

	CDR	I think you had a good look at it before - -
	CMP	I had a good look at it the last time. Then I've got to know -
	CDR	Your - your land - J-3 is right between them. Closer to - -
03 18 42 13	CMP	Yes, but there's a whole bunch of them right between there, and I want - Let me take one more look at that now.
	LMP	Yes, we got a mapping camera pass of that, too.
	CMP	We do?
	LMP	Don't we? Didn't we pass - didn't we take a mapping camera - -
	CMP	Oh, yes.
	LMP	... When you ...
	CDR	Yes, we - we -
	CMP	Oh, with the pan?
	LMP	Yes.
	CMP	No, those - those only - See, I've got a strip across here, too. Right now, we should be going across Arabia aren't we?
	LMP	You want that picture, Ron?
03 18 42 44	CMP	Yes. I've got the whole back side, essentially.
	LMP	Have you got that ... somewhere?
	CDR	There it is - -
	LMP	Which way?
	CDR	- - There with the ...
	LMP	Okay.

[redacted]

CMP Take a look at J-3 again. It says Farouk Crater.

CDR ...

CMP What is it?

LMP Well, it's - I guess it's - -

CDR They got this listed wrong. I guess it's Arabia.

CMP ... J-3 - -

LMP They've got ... listed up with - I guess it's ..., but look at that perspective as we get lower.

CDR What? Yes (chuckle). We're getting down.

CMP Man, I've got to have something to ... brightness.

CDR We're getting down.

CDR Man, are we getting down.

LMP Is that King? Is that what you - -

CDR Yes, that's King, because that's where that - gray from - whatever the heck that one is over there - up through there, on the north there.

CMP Giordano Bruno.

CDR Yes. Giordano Bruno. Let me see, I've got a couple of buddies that are named Giordano and Bruno.

LMP They're Grecian, aren't they?

03 18 44 00 CDR These guys are Italian. How high are those mountains in that central peak?

CMP I don't know.

CDR Ten thousand feet, maybe?

LMP Oh, they're probably - Well, we're still - -

[redacted]

CDR No, I don't think they're that high.

LMP Let's see, we're still - we're still close to 100,000 miles - 100,000 feet.

CMP Hey, Jack, do you have that circle thing on here? Does it have anything for landmark tracking?

LMP Circle?

CMP Yes, you know, that - photography thing? Versus latitude? Is there a scale on there for landmark tracking?

LMP ... photography shutter rate.

CMP Yes. For J-3, which is going to be about - the other side of Crisium.

LMP Looks like you want 1/60.

CMP 1/60?

LMP Do you buy that?

CMP J-3; it's about 40 degrees longitude?

LMP Yes.

CMP Yes. 1/60 sounds good then.

CDR Look at that. Isn't that impressive?

03 18 45 14 CMP Okay. There's a dark halo, and then there's a bright one.

LMP It looks like something just rolled over - rolled over that scarp or the - -

CDR There's a collection of blocks out there on the peak.

LMP Hey.

CMP There's a black flow.

[redacted]

	CDR	Boy, does it ever - -
	LMP	Now, here's that - here's some more of that - maybe some of those light albedo scarps. See it coming up in here? The gray - the gray and the dark mixed. The gray's sort of ...
03 18 47 15	CMP	Okay, Gene, as soon as I finish this P-24, you can give me those - those new NOUN 89s to load up.
	CDR	Okay.
	CMP	Optics; SPEED to HIGH, RESOLVE, SLAVE to SEXTANT.
	CDR	The view is north. ...
	CDR	That black stuff farther up - It looks like there's a crater that hit the side over here - but that black stuff - it may be glass, but it sure flowed down that hill.
	LMP	Just ahead?
	LMP	Big crater out here to the -
	CDR	One right under you?
	LMP	Whatever direction I'm looking now.
	LMP	Who took the Flight Plan from me?
03 18 48 57	CMP	I've got it right here. You want it? No, this is not the Flight Plan; this is -
	LMP	Just want to make sure no mention - Let's see, we don't have anything until AOS.
	CDR	I don't know, Jack. I don't - I don't remember. Remember we're looking at - that's the one that - -
	LMP	I'm looking.
	CDR	I was just talking about now where that - it looks like a - something hit the side, and glass flowed over the -

[redacted]

LMP Yes.

CDR It looks like a crater on an angle, a crater on an angle - or in the wall of the big crater.

LMP Looks like it's a flow out of the side of the crater - -

CDR Yes.

LMP - - at that.

CDR Well, yes, but it looks - there's such a big hole there, it looks like something must have hit it, and - and then caused something to flow out.

LMP Boy, there's a lot of that swirl out in here when you start looking for it.

03 18 50 36 CDR Whereabouts are we, Jack? I don't have a map.

LMP Okay, about where we - Let's try to figure that one out.

CDR Okay.

CDR It's about AOS time. We're coming up on AOS.

LMP Okay.

03 18 51 10 LMP We're 107 degrees west now - east, 107 east. And AOS is like - ... - like in 1 minute. I'm sorry, like in 3 minutes - 3 minutes.

CMP Okay, Gene, you ought to be looking at Moiseev. That one, that one, and right under us is Moiseev. ... got ... there.

CDR Hey, you know, we're lower. We're not going to have the same perspective we had.

CMP What's that big thing we're going over now - coming up?

CDR I don't know, Ron, we're already past it.

CMP We've past it?

[redacted]

03 18 52 05	CDR	Well, we are - our field of view is.
	CMP	Why that - should be going that way.
	CDR	Yes, but we've got to look over the LM. We're looking - ... - -
	CMP	Oh, you're looking over the LM? Oh, okay.
	CDR	Looking way out in front right now.
	CMP	Oh, that's right, you can't look down.
	LMP	Well, Dreyer ought to be off to the - left over here.
	CMP	... 250 on ...
	LMP	... to get in there, but ...
	CDR	Okay, there's Marginis coming up.
	LMP	Yes.
	CDR	Okay, well, this one right here is - I think - Yes. I'm looking right here. I'm looking at Mor - Macrobius right here.
	LMP	...?
	CDR	No, I'm sorry, I'm not. I'm not. I can't - -
	CMP	What - -
	LMP	... Macrobius is right over here.
03 18 53 26	CMP	What - NOUN 89, Gene?
	CDR	For what?
	CMP	For that J-3.
	CDR	J-3, 19 - You want a new one?
	CMP	Yes. Darned thing changed, didn't it?

[redacted]

	CDR	Yes. Okay, better load it. 19.948. You ready?
	CMP	Okay.
	CDR	19.948, 20.051, 0. That looks good.
	CMP	Okay.
03 18 54 12	CDR	There's Al-Biruni, isn't it?
	CDR	Yes, there's Al-Biruni, Jack, right out there.
	CDR	Okay, here comes AOS. ... have them.
	CMP	Yes, it is.
	CDR	Hello, Houston; America.
03 18 54 58	CDR	Okay. The burn was good on all counts.

# # #

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(This page Unclassified)

Tape 17-03401

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 2

Time Segments (AET)

From	To
03 19 59 39	03 20 48 44

Voice and time fair.

SECURITY CLASSIFICATION

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03 19 59 39	CMP	There he goes. Which way is he going to go?
	CDR	Down.
	LMP	He got to go down that way.
	CDR	Down that way?
	CMP	Depends on how you orient it.
	LMP	The tape recorder.
03 20 00 21	CDR	Thank you. We are going to watch your signal get cut off here.
	CMP	...
	CDR	Oh, on the top ...
	CMP	No.
	CDR	Unbelievable. Just like the big-old-hand-of-God signal. Look at that.
	CMP	Yes. See the relief on the surface?
	CDR	Yes.
	LMP	Oh, yes.
	CMP	Look at that ...
	CDR	Watch where North America ought to be now.
	LMP	Ping, there!
	CDR	Yes? A little grazing. It didn't drop off right in the ...
	CMP	...
	CDR	Shove it.
	LMP	When was I supposed to do ...? Didn't they - Weren't they supposed to - Oh, REACQ, okay.

[redacted]

03 20 01 12	CDR	At - Okay, Ron, you can go - after Jack does that TELCOM GROUP 2, AC2.
	CMP	Okay.
03 20 01 20	LMP	Tape motion's verified.
	CMP	Okay. Is the door open on all that stuff on the lunar grav - -
	CDR	No. You go to GROUP 2 first.
03 20 01 26	CMP	TELCOM GROUP 2, AC2. Okay.
	CDR	When in UV grazing attitude, UV COVER, OPEN. And it's 42, so we can do it now.
03 20 01 40	CMP	What's that? Is that HIGH GAIN, MANUAL?
03 20 01 43	CDR	MANUAL; plus 23 and plus 260 - plus 23 and plus 260.
	CMP	Okay. Now what?
	CDR	And then nothing. AUTO and NARROW for AOS.
	CMP	Okay.
03 20 02 07	CDR	And UV COVER, OPEN.
03 20 02 12	CDR	And we got the IR COVER, OPEN, here in about 15 minutes.
	CMP	Okay. Just UV COVER, OPEN? Nothing else, huh?
	CDR	That's all. Is that experiment on - with UV COVER, OPEN?
	CMP	I hope it is. I haven't even touched the SIM bay today. Jack's been doing it all.
	CDR	I tell you, that first two revs is a bear, you know.
	CMP	Yes.
	CDR	Because, first you got all - -
	CMP	I'll tell you.

[redacted]

CDR - - you know, you need a guy to fly, a guy to take pictures, a guy to handle SIM bay, and all three guys trying to observe. It's - it's a four-man job.

LMP That's right. But I think we got through it better than anybody else ever did.

CDR Oh, I'm ... - -

CMP Oh, I think we did, too.

CDR - - ... be. We got - -

LMP The only thing is on the ... SIM Bay Flight Plan.

CMP I blew there.

LMP And the high bit rate proabably, but -

CDR Well, that's all right.

LMP They got it on the - on the short burn, I'm sure.

CMP Yes.

03 20 03 03 CDR UV is ON.

03 20 03 12 CDR You know, you're going to get - tape's not in ...

CDR You're going to get blamed. When you were talking in VOX there in landmark tracking, I didn't know Jack was in VOX.

CMP Yes (laughter).

CDR And - and then I - I yelled over his shoulder, "Perfect!"

CMP (Laughter)

CDR (Laughter) And I also said, "Look at those hills."

LMP The trouble is, it sounded just like the way you'd say, "Perfect."

CMP (Laughter) That's right.

[redacted]

	CDR	Then Bob says, "Ron, are you in VOX?"
	MS	(Laughter)
03 20 03 44	CDR	Oh, well, Gene. I shouldn't have gotten into that yet. Ron, would you -
	CMP	What have you got going there, hot or cold?
	CDR	Hot now.
	CMP	Oh.
03 20 04 12	CDR	Where are the pills? Not the ones I eat - the ones I put in the food.
	CMP	Somebody put them all away, I guess. I don't know where'd you put them.
	LMP	There's some up there.
	CMP	We got some over here.
	LMP	If we'd get this eating out of the way, we'd get all that other stuff out of the way and -
	CDR	I don't know. Where did you put them all?
	CMP	Here.
	LMP	No. This is my pack that had disappeared.
	CDR	Huh?
	LMP	My - I had my pack, too ... - -
	CMP	Watch it. They'll all come out at once.
	LMP	- - I don't know.
	CDR	Well, this is a new one. I haven't seen it.
	LMP	No. Well, that's the one I've been using and I thought it'd disappeared.
	CMP	Here's another one.

[redacted]

	LMP	Okay. I'm not going to touch it.
	CDR	Yes. All you do is verify tape motion. That means they put you in this - right?
	CMP	Right.
	LMP	Okay. I'll ...
03 20 08 16	CDR	Hey. How did you sleep up here - when you slept up here? If you didn't sleep well, let's have Ron sleep up here again tonight, and you and I go down on a sleeping bag, because we really need a good night's sleep.
	LMP	Oh, moderately well. Not as well as down below, I don't think.
	CDR	Ron, how does that sound to you?
	LMP	But, I just - -
	CMP	...
	CDR	They obviously didn't.
	CMP	Yes. Just fill it.
	CDR	I'm not saying you don't have a long day tomorrow, but -
	LMP	You got hot water in there - while you're cooking?
	CMP	Wonder where it is.
03 20 10 06	CMP	Nine minutes to IR coming open.
	LMP	Huh?
	CMP	Nine minutes to IR coming open.
	CDR	Look at that. I almost got all air.
	CMP	What you - what you -
	CDR	Where are our urine ...?

[redacted]

	CMP	Over there. ...
	LMP	Huh? They over in the ... here? No, they ...
	CMP	Why don't we dump them when we dump that waste water?
	CMP	... hours up ... take them off. ... dump ...
	LMP	Well, we don't have a urine dump here?
03 20 13 25	CMP	It is, huh. It's not a bad view. The old grazing attitude. Are you sure it's the right attitude? Huh?
	SC	...
	CMP	No, I just looked. I thought they told me there wasn't - You couldn't - -
	SC	...
	CDR	Even in the camera, I can see some bright, white stuff down there.
	SC	(Humming)
	LMP	... going to be a ...
	CDR	Maybe we ought to turn the -
03 20 15 42	CMP	... 4 minutes.
	CDR	Huh?
	CMP	Four minutes.
	CDR	You got it? IR?
	CMP	Yes.
	CDR	Oh, man. That gas really does accumulate.
	LMP	Have you looked down ...
03 20 18 41	LMP	... whole floors of some of these new craters are just - You can't see where anything - where anything flowed in, but it's just molten - you know the dark floors ...

[redacted]

	CMP	Yes, I know what you mean.
	CDR	You just - You look at them and you can just see it - it's just boiled right there.
	CMP	It doesn't look like debris from the sides or anything. Yes.
	CDR	No, it's a lake - right there at the bottom of the crater. It's a dark lake, and you can just see right into them.
	LMP	... collapse ...
	CMP	Yes, yes. In fact, this is characteristic of the ... craters of all sizes back here, but particularly that size and - and some - say three or four, five times that is that they're filled with something. They're flooded. Some with - -
	CDR	Like ...?
	CMP	- - very smooth, some with a turtleback, and then some with this. If I had to put an age sequence on it, I'd say it was the very smooth, the turtleback, and then this stuff would be the ...
03 20 20 10	CMP	IR COVER, right?
03 20 20 12	CDR	It's IR COVER, OPEN.
03 20 20 13	CMP	Yes. It's OPEN. Shoot! Watch it. Danger, you run in an orbit.
	CDR	..., Ron.
	LMP	10 into B, and B [sic] in B6.
	SC	(Sneeze) Excuse me. (Sneeze)
03 20 22 07	CMP	Aitken has those dome [?] holes filled ... in the crater.
	CDR	..., Ron, ...
	CMP	Yes, that's Aitken.

[redacted]

	LMP	On all the pictures ... taken ... that floor comes out black.
	SC	(Sneezing)
	CMP	Simon and Garfunkel.
03 20 25 30	LMP	Well, it's my time to don a biomed harness.
	CDR	Maybe I'll going to try to take that ... - after you guys are through eating.
	CDR	Stuffed, absolutely stuffed.
03 20 27 27	CMP	Well, I had some chocolate around, you know, but I don't know what happened to it.
03 20 27 59	CDR	Ron, before we go, you're going to have to brief us on - what you're going to decide to jettison - what you need to jettison - so we don't lose anything we want to keep or not jettison something.
	CMP	...
	CDR	The unused ...
03 20 29 42	CDR	What's that? Cocoa?
	CDR	Yes, I had that with the corn chowder (laughter).
03 20 30 12	CDR	No, Gagar - No, that's - that's that one that Lovell tracked. No, that's that one that Lovell tracked - whatever it was.
	CDR	Oh, it was a part of the Apollo 8 task of landmark tracking.
	CDR	Did a lot of landmark tracking tasks in that flight.
	CMP	... there. ... coming up, coming up or couldn't see what the heck it was ... ... my time before I saw the other one come up.
	LMP	What do you want to - Ron, what would you use up here? Would you use the gingerbread?
	CMP	Yes.

[redacted]

	LMP	You ought to tell us what you want to keep. Pudding?
	CMP	... that?
03 20 32 36	LMP	How about some cans of pudding?
	CMP	That canned pudding; I like that.
	LMP	How about diced peaches?
	LMP	No diced peaches, huh?
	LMP	Just a minute, Ron. I'll have some puddings for you.
	LMP	How about sausage, cheddar cheese, tomato soup, mustard.
	CMP	They got about three or four meals back there in - in the other end.
03 20 34 56	LMP	Okay. Don't jettison stuff that's in the small pocket. Is that okay?
	CDR	Huh?
	LMP	In case you get around to looking for stuff to jettison.
	CDR	Okay.
	LMP	Whoops, excuse me. Did I kick you?
	CDR	No.
	CMP	Okay.
03 20 35 33	LMP	How about the LPG - or CWG? Used.
	LMP	Well, I was thinking it might be later on when we run out of tissues. There's a deal of vanilla pudding.
	LMP	Yes. I think - -

[redacted]

	LMP	I'll just leave that in my bag. I think my bag is cleaned out. All I have to do is make a decision on the CWG - dirty old CWG.
	LMP	Well, I was just thinking, you know, if you ever had a big water spill or something like that. What do you do? Vacuum cleaner?
	LMP	Okay. We'll throw it away. Huh?
	LMP	Okay.
03 20 37 23	CDR	If you get a chance, would you get ...
03 20 38 42	LMP	No, I'm fine. I had to ... Yours ..., Ron?
03 20 39 13	CMP	No, I'm putting on my harness. The next thing is AOS.
	CDR	... chocolate bar ... Want any, Jack?
03 20 41 37	LMP	No, thank you. Come here, Ron. Is that a darker - is that darker inside that halo or not? Now think about it; be objective.
	LMP	Yes, sure does to me, too. I've seen that three times now.
	CMP	... of it.
	LMP	Get a picture of it.
	CMP	...
	LMP	Yes. Yes.
	CMP	Don't ... any directional ... - -
	LMP	Most of them seem - Well, I don't know if there are any directional, but they're really metrical halos, in general, rather than just a light - a light area. There are quite a few of them.
	LMP	Well -

[redacted]

	CMP	...
03 20 42 55	CMP	Whose ambrosia?
	CDR	Take my pineapple drinks up there. I don't know what I'm going to do with it now that I made it ...
03 20 43 09	LMP	... this darned canister in ...
	CDR	(Humming) Well, I think it is time to get organized. Let's see, we have one pass to see the landing site here. Do you want those, or shall I open them?
	CMP	... won't be on this side because the edge of the shadow ... right up to ...
	CDR	AOS is what?
03 20 44 00	LMP	... are you putting that in B? ... the number 10? ... Is that right?
03 20 45 04	CDR	Well, it looks like - you're going to do a P52.
	CDR	Well, I think I'm going to be able to take a ... tonight - again.
03 20 45 54	CDR	What's the best time here? We're coming up on AOS. You got the Flight Plan. Got some pads coming up. I guess as soon as it gets dark - take a ... Ron's got to do a P50 - Well, maybe that won't be required. If required, what do you think?
	CMP	Geno? Jack?
	CDR	What? No, thank you.
	CDR	Oh, I got to - didn't log them today. I never logged any nuts.
03 20 48 02	CMP	Well, I guess - do I want to be AUTO? Okay.
03 20 48 44	CMP	You're right. Very ... right.

# # #

[redacted]

(This page Unclassified)

Tape 17-03427

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 10

Time Segments (AET)

From	To
04 07 21 54	04 08 13 04
04 09 26 33	04 09 54 54

Voice poor on first segment; time good.

SECURITY CLASSIFICATION

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[redacted]

04 07 21 54	CDR	No, unfortunately. It doesn't mean we can't have any, though.
	LMP	Gene, how did you sleep?
	CDR	Oh, about 6-1/2 hours - pretty good.
	LMP	Sleep - good.
	LMP	Sleeping all right?
	CDR	Yes.
	LMP	How much water did you have yesterday?
	CDR	I only had three of them.
	LMP	And a PRD when you get a moment.
	CDR	Okay. PRD is - 36 on the end.
	LMP	Okay.
	SC	(Coughing)
	LMP	Oh, excuse me, Ron. You want to say that again (yawn)? Gosh, you guys - my meter's going up a lot faster than yours. Maybe because I don't wear it. (Laughter) I'm asleep. Let's put this in the garbage pile. Really? Good or restless?
	LMP	How much water?
04 07 24 56	CDR	Where are - where are the drink bags?
	LMP	Excuse me, I'm selling.
	CDR	Isn't it - isn't it temporary stowage? Can you get them both? Might just as well get the food sticks, too.
	LMP	Well, get them out later ... pulled around.
	CDR	Well, the first thing we do after eating, and we'd like to get as many things done as we can during eating.

[redacted]

	LMP	Well, I know, I mean fill the drink bags, but the food sticks - you're just going to get - are just going to disappear.
	CDR	Put them in the same bag.
04 07 25 53	LMP	We put those - are you going to wear yours in the suit this time? What did you decide?
	CDR	I think we decided you could put that in for me, can't you, Jack?
	LMP	Yes.
	LMP	Okay. Postsleep (yawn). ... Okay, tone booster's coming off. Quite a vehicle. Quite a vehicle man hath designed here.
	LMP	What? It's not on there, but you -
	CDR	Would you believe, I still got gas on my stomach.
	LMP	Yes.
	LMP	Well, now, let me check again. Don't see it.
04 07 27 34	CDR	I take it back. I take it all back. You do have things screwed on yours.
	CDR	Yes, we all did - things screwed.
	LMP	Yes.
	CDR	I hate to fool with those darned cans.
	CDR	The bags for the tone booster still down in A-8? Huh?
	CDR	Ouch.
	LMP	Don't know why I didn't fill this to the line. Keep the other - other part from filling up, I guess.
	CDR	The old city of New Orleans!

[redacted]

04 07 30 32	CDR	Fill it to the line or you'll get a big old air bubble in there. I don't know. Big old air bubble. Know where you can get the air bubble to where the hose is. Wait a minute. Tone booster was in A - what - 8?
	LMP	A-7 or A-8?
	CDR	Here it is.
	CDR	Ron, crack that ... or that air will come out. No, no, no, no, no, crack the nozzle. The nozzle. See where the air will come out. Wait a minute until I get the air bag over there. Now, I'm going to suck that water up through the air hose.
	LMP	You've got a big chunk of that ...
	CDR	Ron, the tone booster is back in A-8. In the bag. This just doesn't look like much water.
	LMP	I thought we'd be carrying more water than that.
	CDR	Huh?
04 07 33 25	CDR	Yes, I've got most of the air out of that, Jack. Just a little bubble. What's ... after CST down here?
	LMP	...
	CDR	We ought to get a CST update.
	LMP	Well, these are both right. I've got two of them going. Everything - They haven't been off. They're not off a minute. They're just probably ...
	CDR	Do you want to take it off?
	LMP	How about a cup of coffee this morning, Gene?
	CDR	Stay away from the cereals and the cocoa? That's all that's in here.
	LMP	Yes, that's the bad one. They crossed off three things in here.

[redacted]

	CDR	What else is left? Hey, I got coffee. Got coffee in here. All right, we've only got about a half hour to eat - it's going to be a tough one.
	LMP	Instant breakfast ...
04 07 36 26	CDR	How about an extra can of mixed fruit?
	LMP	... me take.
	LMP	Ho-hum.
	CDR	Got your plugs over here when you want them, too.
	LMP	How are you fixed for hot water?
	LMP	Give me about two or three squirts when you get a chance, Ron. If you get a chance.
	LMP	Something ...
	CDR	You only need one.
	LMP	But we ought to kind of take -
	CDR	Yes.
	CDR	You can't - water down there and take that out and leave it here.
04 07 40 35	CDR	Thank you, sir.
	CDR	While you're here, I'm going to ask you to put another one in there. I think so.
	CMP	Did you take my coffee?
	CDR	...
	CDR	Man, I just didn't realize how uncomfortable this can be. (Belch)
	LMP	What's that?
	CDR	This stomach gas.

[redacted]

	LMP	Oh, yes.
	CDR	(Belch) I thought I'd override it after a few days. I don't know how others did, but I sure haven't. Came and went yesterday, but it's sure back here again today.
	LMP	Didn't get any juice this morning. You didn't see a coffee floating around down there, did you?
	CDR	Here's one.
	CDR	Yes - Is it open? (Singing) "Freedom's just another name for nothing left to lose -"
	CDR	Huh? Five.
04 07 46 50	LMP	We go up to 57? There's my coffee. You going to want some, Gene?
	CDR	The o-o-old lunar surface.
	LMP	Well, I think they've been filled with something, Ron.
	LMP	Sure doesn't look like that to me. There's been a molten lake on some of those new ones, I guarantee you. Yes, there seems to be three - four - there are four kinds of crater fill that I see. There's a very smooth, light-colored stuff. There's old Aitken again. And then there's a variety of irregular surfaces, the track, turtle back, dome, domical fillings that seem to be pretty old, and the mare fillings that may be associated with that stuff. It may be contemporaneous like here in Aitken you see them together and it's hard to say one's early or later. And then there's that kind of stuff Gene was talking about - that's just smaller craters, things that that ... in the floors.
	LMP	Here's an extra coffee.
04 07 49 43	CDR	Okay. Who took this stuff?
04 07 54 36	LMP	Oh, man! Get some exercise today!

[redacted]

	LMP	There's star - star Chaplygin. Hurry. Hurry.
	CDR	Yes, you got her (chuckle). You've really got to stretch.
	LMP	Yes, it's gone - too late. No, it's not too late. Here ... Well, it's getting ... even better.
	LMP	I'm surprised you haven't charged the batteries, Ron. Since LOI, huh? Oh, it's not bad - 32 and 33-1/2.
04 07 57 14	CDR	Can you read out the voltage on that other battery?
	LMP	Yes.
	CDR	Is there any way of reading the voltage out on that other battery?
	LMP	You mean the one in the -
	CDR	You can by ... fuel cell 2. But I have to connect it to the bus to read it.
	LMP	You have to connect it to the bus to read it?
	CDR	Yes.
	CDR	Someone's passing gas again. That's not news (laughter). You're not upside down, Ron. I keep trying to tell you that.
04 08 00 40	CDR	For a while, but I hope it's not the last meal we have together.
	LMP	Judas. That's what Judas said.
	CDR	Yes.
	LMP	That's what Judas said, you fink. (Laughter)
	CDR	Not really, we might catch something, but normally we don't.
	LMP	641.
	CDR	(Belch) I hope we can do that when we get ready to suit. It's just going to be a nuisance from here on.

	LMP	...
	CDR	Ron, we got to get those suits out and ... tunnel and hatch.
	CMP	The old probe is stowed.
	LMP	Yes, I know.
	CDR	We can't afford to spend too much time screwing around.
04 08 02 07	LMP	I understand that, Gene. But here they've got you getting the suits out to put the drink bag in. Then, they've got you removing the probe and drogue.
	CDR	Yes, right. It makes sense to get the probe and drogue out. This cabin's so full of junk there's no place to put them. But there's no place to put the suits, if you do it that way. Once you get the suits out, you've got to put it on then.
04 08 02 37	CDR	Okay, at -
	CDR	Work down there? Call P30. That's P20. Got it? And a VERB 21 NOUN 26. And all zeros. What are you - read you with the sleep report? You fool with that this morning? (Cough)
	LMP	Ron, we may want to save that.
	CDR	Got a nice bag for you. How's that? Ron? Ron?
	LMP	...
	CDR	(Singing) "Oh, Mister Moon, Moon, bright and silvery Moon, won't you please shine down on me." (Humming) "Come from behind that tree. My life's in danger but don't you ... Here comes the man with the big yellow ... " (Humming) King the one with all the blocks - wedges in it? King Crater? Is that - is that the one with all the blocks and wedges in it?

[redacted]

	LMP	The wide central peak, doesn't it, with that ray coming down from Giordano Bruno. Okay - you got any juice handy?
	CDR	Yes, yes.
	LMP	They didn't have any juice in there for breakfast. I never heard of such a thing. At your convenience, sir.
	CDR	Two cabin drink bags. We can take a couple of those juices in the LM with us. ... get that air bubble out of there.
	LMP	Yes.
04 08 06 15	CDR	In a couple of minutes, I'll take care of the SIM bay. We want all jets enabled before LOS. Do that - LOS.
	LMP	All jets enabled before LOS?
	CDR	AOS, excuse me. Is that right? Yes, that will be fine. Whatever is closest.
	LMP	All jets enabled before AOS, huh?
	CDR	Yes.
04 08 06 54	LMP	Very good. It's the only way I can drink a lot of water is to drink these juices. Water is - Since I left New Mexico, I just haven't been able to drink much water. No. Well, I'm sorry. You're the only one there. Watch it, now. Somehow or another - Ron, I'll tell you - Let's see, I've got what, three fecal bags in there now? And I think I can recognize them but I - I can't remember to label those darn things. It's such an ordeal - Well, someone else - I tell you - process of elimination - you guys recognize yours and what's left is mine.
04 08 07 56	CDR	Oh, no. Ten minutes - no, it's not - ... 5 minutes here pretty soon. We should be through now, we're 3 minutes behind. Yes, okay - then we got to get the couches in shape. The next big set of events is getting that tunnel clear. And right now, IR COVER's going to go CLOSE.

[redacted]

	LMP	Yes, don't you think? CLOSED, barber pole, and gray.
	CDR	Ron, Jack, could you - -
	LMP	LOGIC POWER, two - OFF down there, Ron?
	CDR	- - take a little bit of water out of there, and you're going to get mostly air, I hope. Oh, oh, oh, oh, wait. Okay - slowly - ... my bubble in there - mostly air. Almost, wait a minute - I get the bubble - Okay, try again. That got it. Mostly water. Yes, that was good. Let's see here - good technique.
04 08 10 05	CDR	... You're to be congratulated. Looks like you did a good job.
	LMP	Hope that gas of yours cleared up. Got too much - to ... one-sixth. I'm sure I speak for you also when I say that (chuckle) nothing like getting all this free sympathy. Doesn't help you one bit.
04 08 10 42	CDR	Okay, you got that, Ron? LOGIC POWER? Two of them OFF? IR's coming OFF. Yes. And give me a - verify.
	CMP	That's verified.
	CDR	How come we didn't leave that on all night? Oh, the Sun, possibly. Okay. All right, gang, we'll wait for AOS and - as soon as everybody's through eating, we can go to work. Yes, you can do that. Go through the normal 20.4.
	CDR	There's a - there's a decal up there for ...
	LMP	Yes.
	CDR	CM/LM pressurization - You don't have to do much.
04 08 11 46	CDR	Do you want to save this cup - this coffee? See what's coming up here. Okay, then we get in the helmet - then we get in the LCGs. We capped our transducers, but -

[redacted]

	LMP	He doesn't have any on? Okay. 0.5 now? Okay. Well, it's not there, but that's because he's riding low. Should be, yes.
04 08 13 04	LMP	Gene, you want to - Yes. DIRECT O_2 is OFF.

TIME SKIP

04 09 26 33	LMP	(Cough) What do you need? A helmet? Tough - tough. Well, there's a label on the outside; I haven't looked on the inside yet. Okay.
04 09 31 33	CMP	What? 108 - coming up on 108:12 in 20 seconds. Set it 108:12:15 then - 30 seconds from now. Set it for 15, I missed it. Okay, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 -
04 09 32 33	CMP	I can't find any stars.
04 09 37 17	CMP	Yes, we're upside down in the wrong attitude. I can't find any stars. Slow - stop.
	CMP	Okay?
04 09 40 10	CMP	Okay. We're finally going to maneuver to the attitude.
04 09 46 59	CMP	Well, we don't have our suits on yet, but we finally got in alignment. We're moving to attitude. It'll be awhile yet. If you want to, I'll go ahead. I can put my suit on at the same time.
	CMP	Okay, let me get my suit on real quicklike.
04 09 48 51	CMP	Yes. You need to get to attitude faster?
	CMP	You need to get the attitude faster? Okay.
	CMP	What the heck is that? Noise up there!
	CMP	Wait a minute - I can't hear you. What? Okay, I can give you that now. Give you T_{ephem}. Okay, go ahead. 108:31 - 3.97 - still 3.97. Okay? Okay, 108:31:27.69.

[redacted]

	CMP	What? Okay. Okay, 32:14.62; 32:25.98. Okay? Three balls 20, 34, 667; 72, 402. Okay? ...
	CMP	Hey, are you guys through with these umbilicals? How do I get them out?
04 09 54 54	CMP	Are you with - Houston? Okay. I'm going to take my helmet off then, and try to get dressed.

# # #

[redacted]

(This page Unclassified)

Tape 17-03428

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 8

Time Segments (AET)

From	To
04 08 09 56	04 08 13 05

Time, good; voice, low but mostly intelligible.

SECURITY CLASSIFICATION

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Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

04 08 09 56	CDR	That's stuff we're going to do on the air, Jack. ...
	LMP	That's a good technique, Gene. You're to be congratulated. Looks like you did a good job. I hope that gas of yours clears up after ... to one-sixth. I'm sure I speak for you, also, when I say that (laughter).
	CDR	Yes.
	LMP	Nothing like having all this free sympathy. ... help you one bit. Okay. You got that, Ron? LOGIC POWER.
	CMP	...
04 08 10 46	LMP	Two of them, OFF. IR is coming OFF. Yes. And UV. OFF - verify. That's verified. How come we didn't leave that on all night? Oh, son ... there. Okay. All right, gang. We're waiting for AOS, and as soon as everybody is through eating, go to work.
	SC	...
	LMP	Yes, you can do that. ... through the normal ... 44.
	CMP	I bet there's a - there's a decal up there for a ...
	LMP	Yes. CM/LM pressurization.
	CDR	You don't have to do much.
	LMP	You want to save this cup - this coffee?
	LMP	... coming out here. Okay; then we get in the helmet. Then we get in the LCGs. We've capped our transducers. Have you done that, Geno?
	LMP	Okay. 0.5 now? Okay.
	SC	...
	LMP	Well, it's not there, but that's because it rides low.
	SC	...

 [redacted]

	LMP	Should be; yes.
	SC	...
04 08 13 05	LMP	Gene, you want to - Yes ... O_2 is OFF.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03430

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 12

Time Segments (AET)

From	To
04 11 13 22	04 11 38 15
04 11 41 54	04 11 55 40

Voice and time good.

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[redacted]

04 11 13 22	CMP	And RECEIVE ONLY to B DATA. Hey, Challenger; America. I'm going to RECEIVE ONLY, B DATA. ... goes in there. Hey, Challenger; America. Challenger, America. There you go. There is SIMPLEX. ... is FORWARD. TAPE MOTION ... report ... commander's.
04 11 14 13	CDR	... FORWARD. COMMAND RESET.
04 11 14 28	CMP	SIMPLEX. Okay, Challenger; America. I need a ... I'm going to ... to you.
	LMP	How do you read, Ron?
	CMP	Okay; I got you that time, Jack.
	CMP	You read me okay?
	LMP	Yes, you're loud and clear, but turn off your VOX.
	CMP	Okay. I'm ... too much, huh?
	LMP	That's affirm.
	CMP	I can't read you right now. I just ... too much.
04 11 15 09	LMP	Turn off your VOX.
	CMP	Okay; just a minute. How's that; any better?
	LMP	Yes, I think that's pretty good.
	CMP	Okay. Hatch ...
	CMP	Okay, Challenger; America. You verify your hatch valves in AUTO over there?
04 11 17 47	LMP	It's verified, Ron.
	CMP	Okay. I'm going to be at the tunnel.
	CDR	Hey, Ron, what are you using for undocking time now?
	CMP	I've got to look in my book here. It's about 1 - Wait a minute. 1 - 110:27.
	CDR	Copy. 110:27.

[redacted]

	CDR	Hello, Ron. I don't - he could use B3 if you need it.
	CMP	Okay. I'll turn it back on here then. Takes a lot longer to depress the tunnel - depress the tunnel - than it does the simulator.
	CDR	Yes.
	CMP	Okay. You through with the - your rendezvous transponder test?
04 11 21 06	CDR	Yes. Sure am, Ron.
	CMP	Okay. I'm going to HEATERS then.
	CMP	Well, then DELTA-P is still only 2.5.
04 11 33 04	CDR	Ron, is the tunnel vented yet?
	CMP	Okay. It's down to greater than 3.5.
	CDR	Well, is that vented? Yes, we're going to press on. That's a big enough DELTA-P.
	CMP	Yes, that - that's a big enough DELTA-P. I'm going to press on now.
	CDR	Okay. So are we.
04 11 33 25	CMP	Oh, what the heck was that? The O_2 FLOW just went up for some reason. ... SUIT CIRCUIT return or open ... That did it.
	CMP	Good. We can maneuver back to undocking attitude.
	CDR	Okay, Ron.
04 11 37 59	CMP	You got about 10 minutes to go.
	CDR	You said about 10 minutes, didn't you, Ron?
	CMP	Yes, that's right.
04 11 38 15	CDR	Okay.

TIME SKIP

[redacted]

04 11 41 54	CMP	Okay. It's a flight trim for P41.
	CDR	Okay, Ron. We're at 5 minutes now and counting. How'd that sound?
	CMP	Yes, I got 6.
	CDR	On your time. Better check your undocking time. Are you using 110:20 - -
	CMP	I'm using 110:27:55.
	CDR	:55?
	CMP	110:27:55.00.
	CDR	Five minutes then, will you?
04 11 42 59	CMP	Okay. Stand by. Twenty - something seconds yet. 5, 4, 3, 2, 1 -
	CMP	MARK it. Five minutes.
	CDR	Okay. We're counting with you, and your attitude looks good here.
	CMP	Okay.
	CDR	Ron, when you get all squared away - -
	CMP	You need a 06 20?
	CDR	Yes, on my mark.
	CMP	Okay. Go ahead.
	CDR	*** 1 -
04 11 44 34	CDR	MARK it.
	CMP	Okay. 000.35, 104.67, 000.52.
	CDR	... hear what you're saying.
	CMP	Say again?
	CDR	We copy it; slower.

[redacted]

	CMP	Okay. R-1, 000.35; R-2, 104.67; R-3, 000.52. How's that?
	CDR	Okay, Ron. It puts us inside 2 minutes and we're ready.
	CMP	Okay. We're all set over here.
	LMP	Okay, Ron. Remember, as soon as it's convenient, you'll start your maneuver to sep attitude.
	CMP	Okay. Will do. DELTA-V, NORMAL, and start the old DAC. Darn thing doesn't work.
	CDR	Better work. Get some pictures of us.
	CMP	Son-of-a-gun! Sorry about that. Okay. At 59:30, I'm going to hang you on the probe. No picture. Okay. You should be hanging on the probe. You are. Okay. At 00 - at 00, we'll back off.
	CDR	Sure wish you'd got some pics.
	CMP	Yes, I don't know why in heck it doesn't work, but it sure doesn't.
	CMP	Okay. Here we go.
04 11 48 10	CDR	You're backing off; we're free.
	CMP	Okay. I got some pics of you.
	CDR	You look beautiful, Ron.
	CMP	Ah-ha, so do you!
	CDR	Are you beautiful!
	CMP	That thing is pretty out there, you know that.
	CDR	70-millimeters, Ron.
	CMP	Okay. That's what I got. I've also got some 16-millimeter at you.
04 11 51 10	CMP	Okay. I'm maneuvering now.
	CDR	Landing gear?

[redacted]

CMP They look great! One of them doesn't have a probe on it, but I guess it's supposed to be that way, huh? The one in the front. Beautiful! Sun's shining right in my window. That's the last picture I'm going to get of you.

CDR The ship looks clean.

CMP Very good. Okay. I lost you right in the Sun for me, so you should be getting some good pictures of me.

CDR We're working at it, partner.

CMP Okay.

CDR America, you look beautiful.

CMP Man, oh, man, I - ought to see those - All I had to do was plug in the camera and that made it work.

CMP Hey, there you are out the hatch window!

LMP Okay, Ron. You're off candid camera.

CMP Okay. Good - good show. You guys make your darn landing now, okay?

CDR Okay. Until we see you in a couple days.

CMP Okay.

LMP No TEI updates.

CDR (Laughter) Don't worry, never happen. Hey, Jack. Remember, part in 175, is that it?

CDR 109, Ron. That's what you are, babe.

04 11 55 40 CMP (Laughter)

# # #

[redacted]

(This page Unclassified)

Tape 17-03468

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 13

Time Segments (AET)

From	To
04 13 08 00	04 13 09 31
04 13 10 56	04 13 22 12
04 13 22 50	04 13 47 41
04 14 12 37	04 14 14 16

Time and voice good.

SECURITY CLASSIFICATION

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[redacted]

04 13 08 00	CDR-LM	Ron, do you still read us?
	CMP	Yes, loud and clear. How me?
	CMP	Challenger, America. Do you read me?
	CDR-LM	*** clear.
	CMP	Okay. You're still clipping a little bit. All I got was the "clear," but that's all right.
	CDR-LM	Loud and clear.
04 13 08 32	CMP	I got that part. Loud and clear.
	CMP	Okay. Coming up on 8 minutes.
04 13 09 31	CMP	MARK it.

TIME SKIP

[redacted]

04 13 10 56	CMP	Okay. BAT BUS B - AC. That's slow coming up any minute. ... good shape.
04 13 11 15	CMP	Okay. Helium valves ... in AUTO - N_2A. SERVO POWER, 1; got it; 2's going on. Okay. ... controller's at AC. DIRECTs are OFF. BMAGs are uncaged. No hardovers. Go to SCS. Okay. PITCH 1; got it. YAW 1; got it.
	LMP	Okay, trim. Plus ... 4, and - plus 0.9. Okay. Try a little MTVC - MTVC - TVC. Whoo! Sure bangs it around. Okay. Okay. Let's see now. Where are we? ... MTVC. Okay, SPACECRAFT CONTROL back to CMC; return to zero; go clockwise. No MTVC. ... okay. Gimbal motors, PITCH 2, got it. YAW 2; got it. Okay. Got a little trim. Plus 0.4, plus 0.9.
04 13 13 00	CMP	Okay. MTVC - TVC, MTVC - TVC. Looking good. Okay. Neutral, returns to zero. Okay, no MTVC. AC/DC on the old POWER. Put up the DIRECTs. Cage the old BMAGs. Okay. BMAGs are RATE 2. DSKY RELEASE. 50 18, PROCEED. ... 18. The 50 18 says we're there. Uncage the old BMAGs, and there's the 50 18.
	CDR	Okay. Try the gimbal test option.
	LMP	Plus 2, minus 2, zero, plus 2, minus 2, zero.
04 13 14 10	CMP	1, 2, 3, 4, - ah-ha! We have drift. Plus 0.4; plus 0.9; 3 minutes and 60 seconds to go.
04 13 14 23	CMP	59.9. The DELTA-V_C burn time was 4 seconds. ... burn time plus 1. Manual ... with the DIRECTs ON. ... burn ...
04 13 16 36	CMP	Okay. ... is NORMAL. ... CONTROL POWER is OFF. ... DELTA-V plus 8. ... before I take another ... Okay. Average g. ... is on. You guys still hear me? Challenger, America. Do you read?
	SC	Yes.
04 13 17 21	CMP	Okay. At 17 seconds. There's ullage. We have ullage. 99 PROCEED. Oh-ho! ... down! Ho - Ho! ... burn.

[redacted]

04 13 17 41	SC	MARK.
	CMP	Okay. 59. ... ... everything over the hill. Okay 59.2. 59.9. Okay. Let's PROCEED out of that. Turn the old GIMBAL MOTORS OFF. Okay. Status. 2; got it. 1; got it. 1; got it. Ah-ha! Okay. Hey, did you guys get the word? The burn is complete. I'll trim it up.
	CDR	Ron, do you copy Challenger? We copy your burn.
04 13 18 41	CMP	Okay. Burn is complete. And all good residuals.
	LMP	...
04 13 20 36	LMP	Ron, we're 210 from the burn.
	CMP	Okay. Copy it.
04 13 21 53	LMP	And we're burning right at the terminator, Ron.
	CMP	Ha-ha. Okay. I'm in a 70 by 54.7.
	CDR	Okay. The DSKY is blank.
04 13 22 12	CMP	Okay.

TIME SKIP

[redacted]

04 13 22 50	SC	...
	LMP-LM	Beautiful.
	CMP	I guess the burn is complete, huh?
	CDR-LM	...
	CMP	... complete ...
	CDR-LM	Hey, Ron, ... update the state vector?
04 13 24 30	CMP	Okay. We'll update the state vector.
	CDR-LM	Ron, we have a fuel ...
	CMP	That's pretty close. ...
	CMP	Forgot to look at the ... on that.
04 13 28 54	CDR-LM	... 21 minutes until we ...
	CMP	...
04 13 33 18	CMP	Okay, ... A.
	CMP	... Last move.
	CMP	...
	SC	...
04 13 47 41	CMP	Okay. ... PDI. ... unless you want to say something. ... call you.

TIME SKIP

[redacted]

04 14 12 37	SC	...
	CDR	... coming up on 3 minutes. We're go for ... Okay, 3. ... number.
	CDR	It's getting close to 4 minutes, Jack.
	LMP	Okay, weight's building up, looking good. ... are good.
04 14 13 42	CDR	Okay, at 3:30 you ought to have 79 ... We're still a little high - about 2500 feet. H-dot is still high.
	CDR	Okay, the tapemeter moves in spurts and jerks both on altitude and altitude rate.
	CDR	Four minutes, 89 by 37.2.
	CDR	BMAGs are ...
	LMP	Okay.
04 14 14 12	CDR	Okay, Gordo. You're ... coming to 340.
04 14 14 16	CDR	And the way I like - -

# # #

[redacted]

(This page Unclassified)

Tape 17-03466

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 13

Time Segments (AET)

From	To
04 13 22 49	04 13 47 37
04 14 13 30	04 14 14 34

Voice very poor; time good.

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[redacted]

[redacted]

04 13 22 49	SC	Beautiful!
	SC	...
	LMP	Okay ...
	SC	Hey, Ron, ...
04 13 24 30	CMP	... take these few pictures.
	SC	... zero.
	CMP	That's pretty close ...
	SC	... we have to look at the ...
	SC	...
04 13 28 54	CMP	Ah ha! ...
	SC	...
04 13 33 37	LMP	...
04 13 47 37	LMP	Okay. I'll tell you ... our PDI ...

TIME SKIP

[redacted]

[redacted]

04 14 13 30	LMP	Okay; at 3:30 you ought to have 79 - -
	SC	...
	LMP	We're still a little high, about 2500 feet. H-dot is still high.
	LMP	Okay. The tapemeter moves in spurts and jerks, both on altitude and altitude rate.
	SC	Yes.
	LMP	... ED BATs are 37.2. ED BATs are 3 - Oh, okay.
	CDR	Okay, Gordo. Yaw's coming at 340.
04 14 14 15	LMP	And the radar light are out. Beautiful! You're looking at DELTA-H. Okay. You're looking at DELTA-H.
04 14 14 34	LMP	Okay; VERB 57 is in. Hey, Houston, is the AGS out of plane correct?

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03418

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 12

Time Segments (AET)

From	To
04 15 02 34	04 15 03 50

Comm good; little background noise

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[redacted]

04 15 02 34 CMP Okay. Mighty fine. Thank you.

04 15 03 50 CMP (Laughter) Okay. Will do. Good way to keep me honest.

# # #

[redacted]

04 16 51 07	CMP	Okay; good. And HIGH GAIN ANTENNA POWER is going OFF.
	CMP	Okay. Are you trying to pull that antenna back in first before we completely [?] change the Flight Plan?
	CMP	Oh, okay.
	CMP	Oh, okay.
	CMP	Oh! Okay.
04 16 54 00	CMP	H_2 tank 2 FANs are ON, now (chuckle).
	CMP	Oh, really? (Laughter)
	CMP	Gee whiz! Guess I picked a good time to be gone.
	CMP	Hey! You know, you'll never believe it. I'm right over the edge of Orientale. I just looked down and saw a light flash myself.
	CMP	Right at the end of the rille. That is on the east of Orientale.
	CMP	Yes, you know, you don't suppose that could be - Vostog[?]
	CMP	I'll be derned. I got to mark that spot on the map.
04 17 00 27	CMP	Just about to lose you.
04 17 05 36	CMP	Spacecraft real time; PCM and real time will not be received.
04 17 12 25	CMP	Okay, the old RECORDER going ON. VHF reminding myself that it's ON. RECORDER's to VHF. Sounder to OPERATE. Stand by for 1 minute. Okay. Tape recorder ... I'm sure. No, no, wait.
	CMP	Okay, ... to OPERATE. Stand by. Barber pole.
	CMP	Change your ...
04 17 15 07	CMP	... Stand by. Pull film for 1 minute. ... 11 frames.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03410

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 13

Time Segments (AET)

From	To
04 16 31 05	04 17 15 07

Voice good until last segment.

Repeats in comm. Erratic times.

SECURITY CLASSIFICATION

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[redacted]

04 16 31 05	CMP	Okay. Stand by. 3, 2, 1 -
04 16 31 14	CMP	MARK it. Barber pole; gray.
04 16 33 15	CMP	Okay, she's STANDBY. Mode has gone to HF. I'll select - I'm going to need Bravo. Too bad. Do old HIGH GAIN, MANUAL, and WIDE. That's 12 and 211.
04 16 34 23	CMP	Okay; minus 12 211. HIGH GAIN ANTENNA POWER is OFF. BIT RATE is LOW ... HF part of it. Okay. We'll stand by.
	CMP	Okay. We'll make it at 17:40.
04 16 37 43	CMP	17:40, went to OPERATE.
04 16 38 44	CMP	18:40, LUNAR SOUNDER, STANDBY. Hey, great!
	CMP	Hey, outstanding! That's great.
	CMP	Now, if the old antenna'd ever come back in, we'd be in good shape, huh?
04 16 39 56	CMP	Okay; we're maneuvering to VHF test attitude.
04 16 46 26	CMP	Okay, Houston. I'm about ready to press ahead, if you all are.
04 16 46 53	CMP	Okay. HIGH GAIN ANTENNA POWER is ON. We got MANUAL and WIDE. Minus about 12 and YAW about 21 or something, 211. MANUAL on the HIGH GAIN. Ah-ha, AUTO. Looks like it worked pretty good. Okay, MODE to VHF. Find it - there it is. MODE to VHF.
	CMP	Okay. Go to OPERATE at 28.
04 16 48 05	CMP	OPERATE.
	CMP	Boy, you talk about night flying, this is the kind of night flying you want to do, by the full Earth. Beautiful out there.
04 16 50 10	CMP	Okay. It went to STANDBY at 30. MODE has gone to HF. RECORDER is OFF. Lose a little comm here, huh? Maybe. Okay, there's Bravo. Select OMNI Bravo. High gain at minus - MANUAL, WIDE. Minus 10 and 25 for AOS.

[redacted]

(This page Unclassified)

Tape 17-03437

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 24

Time Segments (AET)

From	To
05 10 47 39	05 11 26 50

Time good; voice very poor.

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[redacted]

05 10 47 39	CMP	Ah-ha. Okay. 28:03. We'll start the clock.
	CMP	Okay.
	CMP	Okay.
05 10 51 43	CMP	Okay, Gordo. Thank you much.
	CMP	... Eight will go into 60 ..., and 10 will go into 40 ...
05 10 55 00	CMP	Hey, and we started that one after - for the record, started it at 29:09 for the 90-second one. And then - I mean at 28:09, started at 28:09 for the 90-second one. And then we set the clock and started the rest of them on time. So that the 60-one - 60-second one started right at 5 minutes. The next one will be at 8 minutes for the 60-seconder, 10 minutes for 40-second, and ... on the 20-second.
	CMP	Gosh-darn thing ... took a picture ... about 60 seconds ... Okay, 10 will be at 40 seconds.
	CMP	... think ...
05 10 58 51	CMP	Okay. Switch 11:30, we get a 20-second one; 13:00 - Okay, 11:30, we get 20 second; 13:00, we get a 10-...
	CMP	13:00 -
	CMP	Okay ...
	CMP	Eleven. Need another two.
	CMP	... 13:30.
05 11 02 47	CMP	... 50.
	CMP	... - Wow, does the Sun come up! (Laughter)
	CMP	Okay. Cover ... up out there.
	CMP	... 14:50 would have been a 30. Okay, that's

[redacted]

right. Yes. That's right 14:50 would have been 1/30, so that's all right. Worked out good - worked out good. We got that one all except for the 8-minute one. Somehow I must not have had it all the way into the T. Okay. ... Let's see.

CMP ...

05 11 05 34 CMP (Whistling)

CMP Okay.

05 11 08 29 CMP Okay, here we go at 48, I guess it is. LASER ALTIMETER, ON. ... we got a barber pole.

05 11 08 46 CMP Okay, MAPPING CAMERA, ON. *** MOTION, barber pole plus 4. There's a barber pole. ... could have had that a little sooner. Oh, we got the time ... craters.

05 11 10 38 CMP Warm.

05 11 21 46 CMP Well, we'll come across Gagarin and Agassiz [sic] now. You can see the - it looks like a rille going back through - towards the south through Agassiz - cutting on across into a little crater to the south of Agassiz. You know, something that looks funny about that, even though it looks like a mare material, it looks like Agassiz is - slopes with a, maybe 10- or 15-degree slope from the west to the east, with a mare-type floor, at least a darker color - darker albedo floor. There's a lot of swirls in the floor. You - you can't see any topographic expression with those swirls at all. It almost looks like some of the - the light streaks, though, do come from - well, by gosh, they are - they're mixed up from ejecta probably from Bright Baby [?]. And Bright Baby is really right up to the - you can see the ejecta pattern on it, heading generally in a northeasterly direction.

05 11 26 50 CMP Okay, coming across -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03417

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 26

Time Segments (AET)

From	To
05 13 37 29	05 13 37 29
05 19 09 10	05 19 35 28

Comm fairly good; glycol pump running

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[redacted]

05 13 37 29	CMP	Hello, Houston. This is America. Loud and clear.

TIME SKIP

05 19 09 10	CMP	Okay; I just passed over - the - Crater Aitken again. That flat domical feature down there, especially, had a flow that's come out of that feature out into the flat maria trough. You can see the flow channel - going out, and then also, right in the breach right on the side of it, there is a second flow that has come out on top of the breach. And it stopped right in the breach itself.
05 19 10 03	CMP	Okay; there's 50. PAN CAMERA to STANDBY - STEREO - and - POWER. CAMERA to OPERATE.
05 19 11 15	CMP	Okay. For the record there, mag Oscar Oscar took three pictures, one with an 80 and two with a 250 lens, and the exposures are now 106, I guess.
05 19 17 54	CMP	Keep losing my maps.
05 19 27 04	CMP	(Humming)
05 19 31 19	CMP	... all right.
	CMP	There's ... on the recorder.
05 19 33 14	CMP	There's the old Earth. It's about a half Earth now.
	CMP	Houston, America.
	CMP	Okay, Robert. I guess the big thing I want to report from the back side on this one here is that I took another look at the - the Cloverleaf at Aitken, with the binocs, and that southern, domical crater of the Cloverleaf - it has a breach on the east - east side of it. It - I can't tell - There's - there's a flow - In other words, the domical structures themselves are part of a flow material that has partially filled up the breach. In other words, the breach is either

[redacted]

flowed into that little - domical structure before the domes were built, or else - all of that stuff that's in the mare floor has flown out of that domical structure before the domes came in. In other words, the domical structures themselves are a different time relationship to the floor itself. They are younger than the floor itself.

05 19 35 28 CMP

Yes, there - yes, there is. The dome-type material is - The colors again are very hard, you know. I'm just going to have to say that it's - it's slightly darker than the mare floor - is the way it looks to me right at this point in time. Also, the texture is a coarser texture than the floor itself. In other words, the floor, to me, is kind of a standard mare flat-floor-type stuff, and I have to compare the - the texture of the domical hills to - Oh - I guess what I would imagine some of the dacite flows that I've seen out in California. You know, the heavy viscous-type flows.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03414

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 26

Time Segments (AET)

From	To
05 14 46 13	05 15 01 34
05 15 02 01	05 15 10 30
05 15 10 49	05 15 27 03
05 15 30 36	05 15 30 36
05 15 35 08	05 15 36 42

Voice fair; time good

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[redacted]

05 14 46 13	CMP	Oh, hey, one thing. Can you check on mag - What do I have on the Nikon now? XX, I guess? Seems to me like - we just need that for another - zodiacal light thing - which takes about 12 frames. In other words, are there two or three frames available?
	CC	...
	CMP	Do we have two or three frames available on - on that one?
	CMP	Okay. I want to take a red and a blue picture of the landing site sometime.
	CMP	Oh, okay. Yes, don't - no - no problem. I won't use it until I get to the landing site anyhow.
05 14 47 31	CMP	Oh, okay. Good.
05 14 51 09	CMP	Yes, let's get ...
05 14 52 47	CMP	33:48. Okay. Here we go.
05 14 53 02	CMP	33:48. Doesn't sound like the thing's working unless I talk right into it. Good thing it's not on the ... Test 1, 2, 3 -
05 14 53 26	CMP	How's that? 1, 2, 3, 4. Okay. That looks like that ought to work. 33:48, we start the clock. 07:48. That dear old clock.
05 14 53 56	CMP	Okay. BIT RATE is HIGH. Checked that, yes. And tape was going. Okay. Let's see now.
05 14 54 11	CMP	04:30, CMC's in FREE. ... start drifting. Okay. Oh, the old biomed's starting to itch. Took it off here after a bit and see what it's -
05 14 54 44	CMP	Okay. 04:30, we go to FREE; 05:45, take a 10-second one; and at 06, we take a 4-second one and change at 06. Change, then take - At 06:10, we take a 1-second one; 06:20, take one-half. Skip one-fourth, skip 1/15. (Humming) I can sing.

[redacted]

	CMP	(Humming) Boy, that's beautiful out there. Nothing but white sky full of stars in a black, black nothing. You can't tell it's the Moon; you can't tell it's anything. Black, round ... curves.
05 14 56 40	CMP	I'll be darned; there's Regulus. Getting another one right there - out there. Planets, huh? I better get back to work. Okay. I'll bet that's Saturn. No. Can't be Saturn. Something larger or something.
05 14 57 15		03:22. The old CMC MODE switch. There it is. Go to FREE at 04:30. Hold trigger down. Okay, I got a 10. Then we start at 06 with a 4-second. Then at 06:10 is a 1-second. Okay. Coming up on 04:30. Look at that. You get a - No, let's see, we want ... still 5 minutes early. At 05:45, you get the first one. Still get the ... Find the jobberdoo. There it is. Go to FREE in 5 minutes.
05 14 58 54	CMP	Okay. CMC, FREE, ... Okay. ... 05:45, we want a 10-second one. Okay. 40, 2, 43, 44 -
05 14 59 38	CMP	45. At 55, we turn her OFF - 5. Okay. At 06, we want a 4-second. 58, 59 -
05 14 59 52	CMP	MARK it. 2, 3, 4. Okay. 06:10, 1. 06:10, we need a 1 -
05 15 00 05	CMP	1. One half at 06:20 -
05 15 00 14	CMP	MARK. Skipping one.
05 15 00 20	CMP	Okay. It's 30. Okay. Skip one.
05 15 00 51	CMP	... the Moon? There it is. ... at 7. That's 10 seconds early. Okay. The old sunrise came at 7. May have been a little bit early on that one. Yes, that's true. Light's on ... . I won't be surprised at sunset next time.
05 15 01 34	CMP	Okay. PCM BIT RATE, LOW next 7 minutes.

TIME SKIP

[redacted]

05 15 02 01	CMP	Hi, again. Fuel cell purge and the waste water dump here. Okay. Prime HEATERS. HEATERS - didn't have that ON. ... fuel cell purge is all it is. Okay. Oh, 2 - 2 minutes. Okay, 1, 50 -
05 15 02 48	CMP	MARK. 2, 3.
	CMP	Dump the old waste water. PCM, HIGH, at 49. Okay. Oh, yes. ... old door. ...
05 15 03 39	CMP	Okay. Waste water is going. Okay. ... dumped. Let's see, time to get the O_2 up. Yes.
05 15 04 29	CMP	Okay. Just about 1 minute to - Okay. Let's see. Fuel cell purge. H_2, but it works all right. Okay. Seems to be working okay. Little bit higher. I got the old waste water going. Now if I can hook up that BUSS, get rid of that one.
05 15 05 40	CMP	Good one. Urine bag; here it comes. The old urine bag.
05 15 05 56	CMP	Okay. Dump. If I was in real g, those bubbles wouldn't go together. One big bubble; I don't know why. Bubbles everything we've got.
05 15 07 57	CMP	BIT RATE to HIGH at 49. ...
	CMP	(Humming) I wish I knew if that thing was working or not. I guess it is.
05 15 09 54	CMP	Forty percent.
05 15 10 30	CMP	Okay. Going to HIGH BIT RATE.

TIME SKIP

05 15 10 49	CMP	Thirty percent, I guess. And look at the particles. I'll bet that'll screw up the lunar sounder. It is really snowing out there. (Humming) Holy mackerel, we've already passed Aitken. I wanted to take a look at it. There sure is some kind of

[redacted]

a flow around there. You can see the flow marks - flow scarps up around the edges and in the south-east corner of - I mean, southwest corner, you can also see it on the south - I mean, the northwest corner. Up by the cloverleaf, itself, you can see where the flow - the material has flown up over the edge of the - crater wall. Started up the edge of the crater wall almost like that Scarp looks like around the land site. That's what it looks like to me. And let's see. How we doing on the waste water? ... percent, okay. ... the purge.

05 15 14 47 CMP Gimbal lock. Son-of-a-gun!

CMP ... my ...

05 15 17 21 CMP Dad blast it. Oh, the old waste water dump really torques you off in FREE.

CMP Son of a ... Well, shucks.

CMP (Cough)

05 15 27 03 CMP Okay. ... happen anymore. Everything's under control. ... control ... . Matter of fact.

TIME SKIP

05 15 30 36 CMP Oh, ... Oh, ... It wasn't ... Yes. Where to? Circuit breaker.

TIME SKIP

05 15 35 08 CMP (Humming)

05 15 36 32 CMP Houston, America.

05 15 36 42 CMP Well, I think I got it back under control again. Oh, let's see. Let me go back through my - Well, I almost got into gimbal lock. (Laughter) I

[redacted]

missed the last step of the - last step of the solar corona thing, which says go back to CMC AUTO, which wouldn't have been too bad, except as soon as you get a waste water dump, it really torques it around.

# # #

[redacted]

(This page Unclassified)

Tape 17-03415

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 27

Time Segments (AET)

From	To
05 16 53 12	05 17 33 28

Time good; voice good except for last 3 minutes of tape.

SECURITY CLASSIFICATION

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Portions of this document will be classified CONFIDENTIAL, Group 4, to the extent that they: (1) define quantitative performance characteristics of the Apollo Spacecraft, (2) detail critical performance characteristics of Apollo crew systems and equipment, (3) provide technical details of significant launch vehicle malfunctions in actual flight or reveal actual launch trajectory data, (4) reveal medical data on flight crew members which can be considered privileged data, or (5) reveal other data which can be individually determined to require classification under the authority of the Apollo Program Security Classification Guide, SCG-11, Rev. 1, 1/1/66.

GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

[redacted]

05 16 53 12	CMP	(Humming) (Coughing) (Humming) (Whistling) (Coughing)
05 17 00 35	CMP	Hey, finally got a gray. Okay. IMAGE MOTION is ON.
05 17 00 41	CMP	MAPPING CAMERA, ON, - 40 - 41 at 3-minute - ... it run for 5 hours, anyhow. So, MAPPING CAMERA, ON. Barber pole, plus 3. There's one right there. (Coughing) (Laughing)
	CMP	What the heck is that? (Laughing) My tone booster floated over in front of the Sun. Kind of scares the heck out of you.
	CMP	Must be in the wrong window - maybe not.
	CMP	(Coughing)
	CMP	Aitken's going to be out of the other window. Out of window 5, yes.
	CMP	(Coughing) (Humming)
05 17 05 35	CMP	Okay. I guess window 3 is the best one after all. You see it coming up.
	CMP	Little bit of glare out the window, but not bad. Aitken is about two crater diameters from the - from the terminator on this rev. And being close to the terminator, you can look around the general terrain - around the whole area. It's pretty well subdued. There are spots as - what I call plains-flow-type material. The reason I call it plains-fill material as opposed to a lava flow is because the crater population seems to be considerably more - considerably higher in these areas. And, the areas I'm speaking of primarily are just to the east of Aitken and also to the north in some of the low-lying valleys. Try to pick up some sort of flow lines or anything around it. Don't see any this time around on the - on the plains-flow-type material around the edges. Looking at the general edge of the crater Aitken itself, you don't see any positive elements as an ejecta blanket or ray material. There aren't any around. However, the rims, slumping within the rims, particularly on the west wall, is considerably apparent. It is

[redacted]

somewhat subdued, so it is probably - oh, Eratosthenian somewhere in that area, late Eratosthenian as opposed to Copernican. When you look down in the floor itself, there are some light-colored swirls. I guess is the common terminology for it. From this particular angle, in here, I can't see any apparent relief or texture to the floors themselves.

05 17 08 13 CMP

In this case, all the swirls seem to be running from west to east, or east to west, as the case may be. They seem to be essentially lined up in that way, like they had blown across and maybe gone around - a low mound or something like that. Concentrating on the cloverleaf - and I'll call that cloverleaf - in the northeastern corner down there, the biggest apparent thing is there, it's quite obvious, that you have lava scarp flowing up and over the - in front of the slump material that has been slumped down inside the crater, at least some of the original base fill. So the lava flow's definitely after that, and it looks like in one area - in what I'll call the south domical structures down there, there's a graben or a flow graben where it has flown - Well, I can't tell if it is in or out of. I am just losing sight of it, now. I'll have to check that out next time around. But I can't tell if it is flowing in or out, but at least it's a breach. There has been a lava flow, either into or out of the south domical feature.

05 17 09 45 CMP

There are several, you know, there are subdued craters of some kind, completely subdued or maybe still in that type craters in the north - right south of what we call Crater A. Even there, with the shadow of - Sun angle of, oh, must be no more than 10 degrees, or something like that, or maybe a little bit more. But, you can't see down through that shadow. The western rim is very hard. You lose their shadow down there, and you can't see through the shadow at all.

[redacted]

CMP But, in summary, the most significant thing about the crater Aitken, is the fact you have a recent mare flow, and the fact that you can see the flow lines, or the flow scarp - least, on the eastern interior of the crater. In Champlin [sic] there's a little - little turtleback-type crater in there - what I call a turtleback-type crater floor. And there seems to be a few of these on the back side; but not too many. Oh, maybe four or five, as I can recall right now. But, in each case, there's kind of a trough, or I guess you might call it a rille - except it is a D-shaped trough is what it is - all the way around the crater between the crater wall and the interior. Just like the interior is kind of bounded up in some sort of discus form. And, you know, it was eased up and maybe subsided back a little bit on the thing to create the turtleback-type of a texture. However, I can remember some of the dacite flows out in California, you get that same type of appearance from a high altitude standpoint.

05 17 11 59 CMP They look like a rough - well, relatively smooth - turtleback-type of texture on the thing from a high altitude then, when you get down clo - get down low, they were, of course very rough-type of a terrain. But it looks smooth from a high altitude. There is Chaplygin Chaplygin - with the Star of Chaplygin. The Star of Chaplygin, of course, is a very bright crater on the northeast rim of Chaplygin. You know, something that is very interesting to me is the fact that several craters of the - oh, 30-kilometer size - yes, about the 30-kilometer, about the size of Crater A in Aitken. And they're all relatively fresh-type craters, and they don't have any - no real apparent ejecta blanket, except the interior slopes are smooth. They have fairly sharp corners at the top of the rims. And near the bottom they have a flat floor of some kind, and some of the floors have, you know, it is a definite sharp contact - sharp-angle change from the floor to the wall. It is hard for me to visualize how you could have something sloping down the side of a crater and proceed out in a - in a horizonal floor.

[redacted]

05 17 16 13	CMP	And then in other craters of about that size, and also that age regime, you'd almost - think that they were from mare-type floor, because the - the color of the material in the floor is essentially the same as the surrounding terrain.
	CMP	Okay. We're passing Marconi now.
	CMP	Dellinger and Pannekoek coming up.
	CMP	Oh, my! Mendeleev is really a big old basin up there.
05 17 20 17	CMP	... Crater Panner - Pannokek - Pannekoek, or something like that, next to Dellinger has a turtleback-small turtleback - 30-kilometer crater inside of it. And then on west of that, there's a recent type crater - I say recent again, because it has a smooth, sloping interior rim - and - but again with no ejecta blanket. And also, the northwestern slope of that particular crater, you can see - it has to be a flow slide, as the type of material has gone down into it. The ... comes strictly from the rim, all the way down to the crater floor.
	CMP	There's a tremendous crater chain or something going off in the northwest direction. It goes south of Rutkin [?] right next to Becvar. No, that can't be right.
	CMP	Negative. I said that last thing - the crater chain is there, but I can't figure out for sure where it is (chuckle). Oh, okay. Here's Love, so - it's just north of Love Crater. There's ... Gregory. Echo [?] is a big basin that is pretty obvious to see. Roosa [?] Crater is right on the rim of it. Becvar is down in the middle. And then - on the edge of Becvar - on the edge of Becvar is another relatively recent, but not as good - not as recent as Roosa [?].
05 17 23 41	CMP	Roosa [?] has all different colors of - material on the thing. Light material down in the walls itself and from the - about the upper one-eighth or something like that, you can see - it almost

[redacted]

looks greenish from here, at this particular Sun angle. That's a greenish-type layer, all the way around the top and presumably there's a great big monstrous block of some type. And you can see that greenish-type material - there's a slump - slump fault on the southern edge of Roosa [?], and you can see that greenish - a hint of that greenish-type material at the top of that slump mark also.

05 17 24 41 CMP

Sure funny - the way those things fall off back down there and - although in the case of Roosa [?] it's quite apparent. You can see herringbone, hummocky-type material, or ejecta blanket, all the way around it. It covers up all the way across Becvar and every place else. You can see it all over the place. But it sure seems to be a heck of a lot of the material falling back in the middle, somehow. They usually start out as a small - smaller craters and just keep caving in, or something. There has got to be some big blocks down there. There you can see the crater King. On across there - and coming across the Arabia now. Looking out across the horizon you can see that it's away. Yes, it's just a wide spot where Creek - where King is, I think, - especially to the north of King and to the south of King. It's a little bit higher than it is to the west. There's a little bit of a plateau - even a crater diameter from King off to the northeast. You can see Labachevsky clear up on the horizon now. And there's some sort of a - a greenish, - again, in this sunlight to me it looks kind of a greenish - a greenish tint to it anyhow. I don't have my sunglasses on either, by the way. The ... flow is all - There's a fresh crater - about a crater diameter south of King. That's maybe 20 kilometers in diameter. It's obviously an impact-type crater. But again, you have the dark-greenish layering around the top of the crater. And maybe it extends for about one-eighth of the crater depth. And then you can see some hint of the green - greenish or darker-type material down at the bottom of the crater floor.

05 17 27 52 CMP

I think you would have to be quite a bit lower than I am, right now, in order to really pick up - from

[redacted]

among all these craters here. This thing here, I guess you, could see a typ - topographic rise over Saenger.

CMP I can't get over the curvature. In this attitude, it really shows up. As I come across Rayley [?] here, I keep looking for a swirl. And I can see a definite type of clusters. The only thing - It's an awful high Sun in here to really see any swirls. Now, there is something coming up over the wall of Labachevsky. Yes, it looks like a lighter swirl-type material and then - Let's see - to the west - southwest of Lobachevsky it looks like a heck of a lot of swirl-type material in that area.

05 17 32 00 CMP And the albedo's - a light - dark - I guess what I'm trying to say is, they are almost ray-type of expression. I don't see any topographic expressions; especially the one that goes down - down in the crater and also to the south as the one between Chang Heng and Labachevsky. Rooster Tail [?] is a very bright subcrater. The ejecta blanket - it goes all over the place, scattering rays eight to 10 - eight to 10 crater diameters from it. And, it as well as some of the Eratosthenian craters around Saenger.

05 17 33 28 CMP It seems to me like it has a little bit of a hint - at least of a layering or a definite different colored material on the top of all these craters.

# # #

[redacted]

(This page Unclassified)

Tape 17-03416

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 29

Time Segments (AET)

From	To
05 20 46 06	05 21 35 27

Voice very poor; time very good.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

05 20 46 06	CMP	Good thing I looked. Okay. And P52. Get gyro torquing angles. Let's see, we had 7 and 14 angles, wasn't it. We're not torquing now - we torqued at 190. Okay. We went to AUTO, got to do a GDC align. Okay. We'll go MANUAL and WIDE. Ten, 25. Okay. We're configure. Okay. Lima Lima for 21 frames. Well, let's see. About to finish that one up. VERB 62 is not here though - CAGED. Good. Let's see.
	CMP	C - T goes in. Ten, here it is; 1.4. (Whistling)
	CMP	T - pull all these damned things out - get them over in the other bag. But the jett bag is full of junk already. Well, two jett bags ... but we need another one.
	CMP	Okay. Enough for both of them? (Whistling)
05 20 50 33	CMP	... TANK INLET to AUTO. POTABLE TANK INLET is OPEN. WASTE TANK SERVICING is CLOSED. REPRESS PACKAGE valve is OFF. Better than the simulator. ... REGULATORS are both CLOSED.
	CMP	The old jett bag. (Humming) (Whistle)
	CMP	... good. ... find my 8-second intervalometer. ... Gatorade [?].
	CMP	... stuck on, but it sure doesn't.
	CMP	... no wonder ...
05 20 55 31	CMP	Okay, intervalometer. Got to start counting 8 seconds here. Let me ... it pretty quick.
	CMP	Jett bag is full!
	CMP	Yes. ...
05 20 57 32	CMP	Solar corona.
05 21 06 37	CMP	There we go. Just passing Aitken again. It sure is interesting seeing a little bit of everything in there. I looked down in the - in crater A in a shadow, something all the way down inside there and in a box-type thing. But there is a definite glow - Hey, those swirls are almost gone. You can

[redacted]

just barely see them now at this low Sun angle. The swirls are almost gone out of the crater Aitken. You can barely even see them so that's a pretty good indication that there is no topographic relationship to the - between the swirls.

CMP Can you find ...? Yes. ... going south ...

CMP Next time I go by Aitken, I want to look to the north and take a look at that mare fill, or the plains-type mare material out there or whatever it is. And see how that compares with the floor. But, the floor of Aitken is definitely a volcanic flow. You can just - you can see the flow lines and especially - and oddly enough they look like miniature wrinkle ridges of the Serenitatis Basin. It, to me, is very obvious that there is nothing but the flow front. In other words, if you've got a flow going down there and that's the part of the flow that kind of cooled. And the rest of the flow continued to - to flow in one direction, at the edge of the flow.

CMP ...

05 21 10 15 CMP And I forgot to look at the central peak on that thing other than the fact that I can remember the - the high-water mark. If - you've really got to check that high-water mark to make sure it's a high-water mark and not a talus slag - occasional talus slope. I've got to check that for sure.

CMP ... It's just - a little ... ... No back slide. Okay; at 41 - 40 ...

05 21 14 20 CMP Okay. There's Chaplygin ... Okay. Marconi. The There's Marconi. There's Marconi. Vil'ev and - Dellinger and Panne - Something like that.

CMP Pannek - Pannek - oek - Pannekoek - Pannekoek. Man, oh man. Look at that - Look at that secondary crater chain really goes bouncing along. ... Crater down there. Marconi. It's got some kind of debris or something at the bottom of it, something - debris.

05 21 16 22 CMP There's an ejecta. Okay, Pannek - Pannekoek; Dellinger. ... wouldn't mind the Dellinger. That's a - Oh, that's a big fella. Going down to - Chauvenet.

[redacted]

Lane coming up. Hey, this whole area right in through here is as ... eroded ... and interspersed are the craters that are - maybe four or three or four or five of them up in the 50-kilometer bracket, but most of them are in the 20- to 30-kilometer bracket. Of course, they are not the little bitty ones. But, they're like little beads in that they're still fairly sharp down in the rim, down inside the crater that makes the crater sharp, if you have these stri - striations.

CMP Well, let's see now here comes old Love. Let's see we'll start to the right of Love, go the right of Roosa [?], Becvar, right though the middle of Arabia. What we'll do on this pair is - ... we want to kind of get a picture out to the north to the ... leave it there and point the camera to the north. Could be one of those craters. Okay. We'll stop about - about the time we get to ... 215 ... Can't find it. Okay. This is Love. I can ... ... Love showed up at ... Okay. This is Love. Let's see, 59, supposed to be 140 or 130. That's about right. I'm starting to itch.

05 21 20 40 CMP When we get our pan camera pictures, take a look. It's got a lot of dark material. I think it's a good - There's a real little bitty impact crater must be, oh, 100 meters maybe, if that big. One hundred meters across and just to - to the east of that triplet of Love. Can't hold it in my ... long enough to look at it, but be sure and check the pan camera film for that. Okay. We're at - about at 130 and ready to go. ... Okay. So, yes, that's about right. My ... is a little bit ... off.

CMP Okay. There's old Becvar. Becvar is not much more than a dish. The one that apparently is eroded dish that's got a bunch of ... from Roosa that's been thrown out, I guess. And possibly from that other one that's just to the north of Roosa ... but right on the edge of Becvar - the rim of Becvar. Probably hasn't thrown out too much because Roosa has thrown up some stuff on top of it.

05 21 23 21 CMP ... Stop my camera up there. Got more pictures of King than I know what to do with. You know, down here go Abul Wáfa. Abul Wáfa.

[redacted]

CMP ... stripe shows up ... Abul Wáfa ... 250. Check the old pan camera again. Just to the east of Abul Wáfa there's a vertical black stripe that runs at the right - at west - western interior rim of - of about a 150-meter crater, just to the east of Abul Wáfa.

CMP It shows up as a black - black stripe down there. Firsov ... Firsov's the one that's got all the swirls out there; that's what that is. Yes, Firsov has got a whole bunch of swirls to the east of that and about a crater diameter from it. Those are the swirls that are all over the place, I guess. And I mean that the dark part of those swirls looks a heck of a lot like Reiner Gamma did, except it's hard to compare because they're different - different lighting on the things. But the swirls to the west - to the east of Firsov and a crater diameter out, they seem to be somewhat radial to Firsov. Dark parts of it are a dark - let's see - Well, it's not the mare. It's not a mare tan. Darker - and it's not even as - it's darker than the - the tan of Serenitatis. I - we should have gotton these - those swirls in there. I can't see any topographic expression to them. It's hard to - and yet it - there's got to be something associated with it because - I hope we've got a picture of them. I'm sure we got a picture of them. They're light; then they're dark; and then they're light again. Kind of con - concentric type of swirl, light-dark-light-dark. Same stops to ..., Saenger, and rooster tail. Okay. There's Saenger.

05 21 28 39 CMP The hardest part about taking pictures is that you've got to make sure you look through the viewfinder, make sure the other half of the camera isn't looking into the side of the window.

CMP Get - get perspective of the - the ..., where as, the rays and depressions around Saenger and the rooster tail is higher than either side of Saenger. I guess the rooster tail is really on the western rim of Saenger - Pictures ... 53-70?

CMP Okay, ... coming in.

CMP It's a full roll. ... That's striation, vertical ... up and down the - interior rim. And it looks like there's a black - but they look green. You

[redacted]

know, looks sort of a green-gray in this type of light back of this ... A green-gray material from the center of the rooster tail, on the floor of the rooster tail. And the floor is about one-fourth the diameter of the rooster tail.

CMP ...

CMP Peirce, you have 250. Eight-second intervalometer. And I lost my intervalometer. I'll count 8 seconds. ... disappeared. (Laughter) Okay. Let's see, we're about 155. Let's take two more picture on this frame and finish it up on Lima Lima, huh?

CMP Stop to the north.

CMP ...

CMP There's a ... inside that, different type of relationship than the floor itself, younger than the floor itself.

05 21 35 27 CMP Yes, it - yes, there is. The dome-type material is - -

# # #

[redacted]

(This page Unclassified)

Tape 17-03463

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSEARTH COAST

Time Segments (AET)

From	To
06 08 30 32	06 09 09 53

Voice poor on first half of tape - Time OK.

SECURITY CLASSIFICATION

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[redacted]

06 08 30 32 CMP Okay. Mighty fine, Gordo. Thank you.

06 08 47 03 CMP What happened to my grits? I lost my grits. There they are again. Anything you drop up here - It just disappears, flat disappears. You'd think it would stay there, but it disappears - somewhere. If it shows up again, but - -

CMP I don't know if I have the same terminology that John Young had on Apollo 16. And I don't think it has a darn thing to do with the orange juice, but it's sure got the gas. Man, oh, man. And I'm not sure it's really the effects of the food. Gene seems to think it has, but I - I think ... will remember all this gas or what have you. ... one aptitude test down there - because I didn't eat it for this long - only ate it for four. - Well, I guess we ate for 6 days. I should have had it by then, because I sure had it all the way up here. So I think it's a function of zero-g. You may as well plan on having a bunch of it and - that's the way it goes. Back to putting a little water in the grits. I know where a lot of this gas comes from - is right out of this old water separator. I mean gas separator. Each squirt that comes in there has a few bubbles with it.

CMP As I said before, I'll never understand it. Something about these spoon-bowl packages. All the air ends up in one bubble - one big bubble. And, in all of the beverage packages, and every thing. You couldn't get one of those bubbles to go together if you had to.

06 08 52 14 CMP We had quite a bit out of the old sausage patty bag, so when I squeezed it, it broke at the seam. Right at the base of that triangle that goes into the - eat port on the thing here. No problem. I'll just cut a chunk out there and eat out of that little chunk.

CMP Pretty good sausage.

CMP Every time one of those jets fires that you can see out the window, on the thing, it looks like a lightning flash, which kind of surprises me in a way. It seems to me like on the way - somewhere

[redacted]

along the way, we had - maybe it was the APS burn. Yes. Earth orbit. In Earth orbit, when the APS fired, it presented a kind of an orange - an orange glow whenever the APS fired. And now the RCS - whenever it fires on the thing, you get kind of a - just a white lightning flash, really.

06 08 59 09 CMP

Well, I'll be durned. Aitken's already filled up at the terminator, so that's got to be a deep crater. You can just see - a hint of light on the central peak, and you can see light on the eastern slopes. The northeastern slope looks like a massif event. The southeastern slope looks like - I'll be darned. That's a rough, very rough looking stuff almost like a - Oh, it's got furrows in it. You can see lineations going off to the southeast. Very rough - not hummocky at all. The bumps, or what have you, are too big to be hummocky. Maybe it's a - I'll be darned. I'll have to take a look at the pictures on that part of it. But it sure looks like some kind of scraping in the area, something that has scraped it away and left deep furrows down in it. And the same thing on the southern rim. On the outside of the southern rim, you got a little bit of a raised rim, and then you go down - It looks like a - - No one I can think of right now.

06 09 01 06 CMP

It's a highly eroded - almost like a water erosion - the river-bottom type of - not river bottom but the walls of the river, you know, where you - the - where you have a steep slope and you have water - not the river itself running down through there, but just the rainfall and stuff flowing down the edge. And it weathers away and washes out the cracks and gullies and the rock. And if you want to cross a hard rock, the - the hard rock stays there and it kind of washes gullies around it. And Crater Zepplin (?) while we have some cameras and some film now - the Crater Zepplin (?) has a lot of low-lying plains-type of fill in it. The plains material in some places doesn't look anything like the floor of the Crater Aitken at all. You have more of a hummocky type of appearance to it. You can see where the craters end. You can see where it's been filled up with something. But it's still a rough - very rough as compared to the floor of Aitken.

[redacted]

06 08 02 31	CMP	It seems to be the - the general trend of a lot of the craters here now. Especially the one in Zepplin. Zepplin is all beat up. Now the rest of these - What in the world is that monster down south? It's one big - Oh, that's Ingenii. I'll be darned. Okay. That's Ingenii. There's Van de Graaff. Van de Graaff's got to be back - Got to be Ingenii because it's the only way out - the only way it swirls out in the mare itself. I'll have to look on my map for sure. I'm supposed to be eating. I just wanted to see if we're going to be able to get a picture of Aitken at all. And it looks like there's some reflection down on the floor - There's some reflections - back reflections on the sides, and you might be able to see the floor down in there. And I'm going to open it up and try it. That way - that's for sure we'll get around to taking pictures of it.
06 09 03 53	CMP	It's going to be - it's going to be in the shadow. But it is - already is, as a matter of fact.
	CMP	Okay. Check that out when I come around again.
	CMP	Hey, that's the first towelet that I've had that's been wet. The rest of them all been dry. Still stink, anyhow. (Laughter)
	CMP	Oh, I'll be darned if I didn't let my grits get away from me again.
	CMP	There they are. Found them under the couch.
06 09 09 53	CMP	Here I am eating grits with my left-handed spoon. Gene, I'm not bad-mouthing. I love you. I just wanted to let you know that I had a left-handed spoon on board.

# # #

[redacted]

(This page Unclassified)

Tape 17-03421

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBITS 37 AND 38

Time Segments (AET)

From	To
06 14 13 32	06 14 27 31
06 14 31 05	06 15 13 18

Time good, voice fair

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[redacted]

06 14 13 32	CMP	There it is.
	CMP	Yes, sure does. Even crackles up here, but I think it's a lot worse down there, isn't it?
	CMP	Type of stuff that you want to feed through to the LM, prior to - stuff.
	CMP	I'm sitting on an omni waiting for lift-off, I think.
	CMP	Say again, Bob?
	CMP	(Laughter) Okay.
	CMP	Very good. Yes, I hope this one works.
06 14 18 19	CMP	Right.
06 14 24 25	CMP	Is it starting to look pretty good on your high gain antenna scale down there - have you switched to high gain yet?
	CMP	Oh, okay.
	CMP	Right.
	CMP	Hey, worked like a charm.
	CMP	(Laughter) It does, doesn't it?
06 14 25 50	CMP	Well, you are, really. It's really great.
06 14 27 31	CMP	Okay.

TIME SKIP

[redacted]

06 14 31 05	CMP	I'll tell you what, I'll start that.
	CMP	Yes. I'll start that as soon as I get the cl - cover closed on T-stop. That will give us a minute or so there, too.
06 14 31 33	CMP	Okay.
	CMP	(Humming and singing)
06 14 41 27	CMP	What kind of goodies do we have in here today? Punch. Orange-pineapple drink. That's ... Got a piece of Velcro on it this time. (Singing)
06 14 43 40	CMP	That zero-g works just like in one-g. You've got to shake these things to mix it - just shake it back and forth. Makes more little bubbles that way.
06 14 44 29	CMP	Find my cheese spread.
06 14 46 55	CMP	... UV COVERs are OPEN - I mean, CLOSED. There! Just made it (laughter). Okay.
06 14 54 22	CMP	You look beyond Jabber (cough) u-n-i-a-n, there whatever it is. Looking into the Sun, now, and it's completely pockmarked. It's a plains-type of material though. And I guess so - You'd call it a plains-type material, or it's lighter - it's a lighter albedo than - for instance, the Mare Serenitatis or Crisium, or this type thing. It's a lighter - lighter tan. Well, as a matter of fact, the whole thing looks tan here in this type of the Sun angle. And when you get up a little bit higher, the Sun angle - it kind of changes to almost a bright - a bright tan.
	CMP	01 - a 01111. Six, seven.
	CMP	Oh, get P20 going. It's time to eat. Ten - 25 - (Singing)
	CMP	The serial number of the bread - a bit of irradiated ham. (Singing) Man, I've got a little urine stuff on my window over here. One or a cheese ... Something like that.

[redacted]

06 15 01 10 CMP There's Agassiz. It's a little more - little more subdued than Aitken. It means it's probably a little bit older - older crater. There's a scarp going through there. I can't tell - oh, no. It's going to be a rille. It's coming from the highlands, off toward the little crater on the south side of it. And that - well - it starts out as a rille and then looks like it turns into a wrinkle ridge. And at one point, I thought it went up the sides and into that little bitty crater. But now, I can't tell for sure if it does or not. I don't think it really does, although it continues on across to the south of that - to that small crater. And now you can see an indication of it going up the side of that crater, too. There's a small crater just to the south of Agassiz. It's on the rim of Agassiz. But it doesn't lay a mare-type flow or wrinkle ridge around the thing or maybe those are - it's a flow front going up across there.

06 15 02 31 CMP But I think that small crater in - No, no, I've got to figure out a unit of deposition. The wrinkle ridge in the scarp goes through the crater floor. It also goes through the crater to the south of Agassiz.

CMP Wonder where my map is?

CMP ... and I missed that one. Let me - Gosh, there's Tycho. Holy mackerel, you can really see that flow. I got to - load camera.

CMP Okay, that's frame number 106 and 107 on magazine Oscar Oscar. And it's a flow that is definitely - it comes back to the north of Tsiolkovsky. I said Tycho while ago. I can see Tsiolkovsky because to the north of Tsiolkovsky flowing down the inner crater, and that's the same type of material that's on top of - Well, I'll be darn - It's the same type of material, looks like it's on the floor, and also it's been sloughed down in the crater, before the deposition of the flood itself. In other words, it's -

06 15 06 16 CMP You just got to say it's a lava flow - tell by the material ... It's got flow lines in it. It has lobate flow fronts sticking out on it, and up on the top of the crater rim, in the northeast corner -

[redacted]

This is picture number 108, mag Oscar Oscar of the wrinkly, crackly floor of Tsiolkovsky. That's very interesting. Okay, 110 is a picture just to the north of Tsiolkovsky. I don't know the name of that crater, yet. There's some interesting stuff around here. But the reason I took that picture 110 is because it looks like a flow-type crater doublet. And it is the same type of material from the floor of the larger of the doublet, and it's drifted off to the east down into the older crater - the smaller, older crater of the doublet.

06 15 09 05 CMP I'll be darned. Yes, that landslide - No, I'll reserve judgment on that until I can get over and take a little closer look at it. But it gives the same type of flowline as comes from the - as the lava flow. It's the same albedo, same color, as the stuff in the northeast corner. I guess I better eat here, while I'm going to see this.

CMP Find some bread and ham in here now.

CMP Lost the craters, and now I've lost my map, too.

CMP Where are these drink bags?

CMP Well, I've had those for 3 days.

06 15 13 18 CMP Stand on my head - Yes, I did - stand on my head, and they turn into bumps instead of craters, again.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03422

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBITS 38 and 39

Time Segments (AET)

From	To
06 18 32 35	06 18 39 13
06 19 07 24	06 19 13 03

Music for about one-third of tape; fair comm

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[redacted]

06 18 32 35		(Music)
06 18 38 32	CMP	Test 1, 2, 3, 4; 1, 2, 3, 4; 1, 2, 3, 4. Okay; so that's the transmitter that's not working on this staging. ... Yes. Something's happened ...
06 18 39 04	CMP	Test 1, 2, 3. I'll give it another lick; I thought I could still hear something.
06 18 39 13		(Music)

TIME SKIP

06 19 07 24	CMP	At about - at about 165:31 or 32 in there, I used mag Mike Mike and took frame 173 and 174 looking north from ... Last one was in the vicinity of Lara Crater.
06 19 13 03	CMP	Okay; it's mag Oscar Oscar. Frame 120 is looking back at a kind of a brownish streak on the crater. Where in the world is that crater? Let's see. Brownish streak surrounded by two - gray-type things. The brown streak looks like it - crat - Okay; that's a ..., I think.

# # #

[redacted]

(This page Unclassified)

Tape 17-03423

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 40

Time Segments (AET)

From	To
06 22 24 37	06 23 13 49

Time, good; voice low but understandable.

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[redacted]

06 22 24 37 CMP Okay. We'll see you on the other side there, Bob. Thank you. Okay? (Laughter) Okay.

06 23 13 49 CMP Okay, Houston. This is America. Once we get the antenna set right, it is easy to lock up.

# # #

[redacted]

(This page Unclassified)

Tape 17-03438

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 48

Time Segments (AET)

From	To
07 10 52 10	07 10 57 18

Voice poor, time good.

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[redacted]

07 10 52 10	CMP	Okay, coming up on 1 minute here.
	CMP	Next 30 seconds.
	CMP	Hey, here we go.
07 10 53 34	CMP	Full power's ON mark to mark. Okay, 1.2 ... Z.
	CMP	Okay, plenty bomb time ... Past the hat [?] Hey, some real flashes out there. Minus-X test is on. Holding attitude pretty good, with slight alteration; 16 seconds 5.7. Hey, okay. We're burning, 25 seconds. Thirty seconds to get a minus 0.5 and a plus 0.5 in Z. Okay, so we pull out the minus 0.5. ... there's a 2 plus 0.5 and Z plus Z is down ... got a roll at 7 ...
	CMP	We'll trim that to Z, turns into a plus Y.
07 10 55 48	CMP	There, we've got it. NOUN 85's at the end of the trim. R - that zero, two zero, 270, 170.
	CMP	Okay - DELTA-V_C is minus 1.
07 10 57 18	CMP	Okay, let's go back to LOW BIT RATE.

# # #

[redacted]

(This page Unclassified)

Tape 17-03439

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 48

Time Segments (AET)

From	To
07 11 48 28	07 11 56 29

Voice and time good.

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[redacted]

[redacted]

07 11 54 16 CMP SHUTDOWN - that's automatic. Okay, minus 9.5 on the EMS. Okay, 366.8. Let's proceed to stop the rates here. 6.8. Okay. Man, look at those 85s. I'm a little bit off, but that's good. Okay; PITCH 2, got it. YAW 2, got it. And number 1, got it; number 1, got it. Okay, SERVO THRUST is OFF. Well, let's see. I've forgotten what it feels like. Ha, that's pretty neat. Okay - that was okay. Somehow we got a 0.3 in there. That's in X anyhow; Y is zero; that's what we want. Z is all right, so let's just leave it that way. I'll proceed with the changes again. That just changed. Okay; 00 ENTER. Okay; ERB 06 NOUN 20 ENTER. Okay, I presume you're reading the DSKY there, haven't you been, Houston?

CMP The time as near as I could tell was pretty good. V_{GX} - What did I say - 366.8, I think. DELTA-V_C is a minus 9.5. Tail-off is 11 or something. ...

07 11 56 29 CMP Okay. Let's get some more switches off. TRANS CONTROL POWER - -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03440

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 49

Time Segments (AET)

From	To
07 12 20 15	07 13 04 15

Voice fair; time good.

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[redacted]

07 12 20 15	CMP	Okay; Canopus, where are you? There she comes.
	CMP	Adapted or something (cough). Canopus is the old blue star.
07 12 24 54	CMP	Okay.
07 12 36 08	CMP	Okay; LASER ALTIMETER is coming on at 16:15.
07 12 36 21	CMP	LASER ALTIMETER is ON. Barber pole?
07 12 36 37	CMP	CAMERA's coming ON.
	CMP	There's got to be something. Horizon. (Cough) It's just like coming into LOI.
	CMP	Oh.
	CMP	Okay; ... should be coming on - -
07 12 41 47	CMP	Man, I stink! Whew! And myself.
	CMP	Okay; that's looking north from - frame number 3, looking north - on the magazine Yankee Yankee - looking north from Gagarin.
	CMP	Okay; that's mag - that's number 4, looking right at Agassiz [sic]. That's south.
	CMP	Five is looking south from Gagarin along the terminator. Let me see if I can get this back across old Mar - Looks like an upside down picture. Not Marginus, I mean - Ingenii, I think.
	CMP	Okay; mag Oscar Oscar, 130, was taken at Agassiz.
	CMP	Okay; 131, looking south of Agassiz off toward Ingenii.
07 12 46 43	CMP	Okay; frame number 133 is looking north - Let's see, just - I guess Marconi. Let me look for sure, though.
	CMP	That's Marconi. Just past Chaplygin. Yes; there's a lovelet.

[redacted]

CMP I want a piece of candy here.

CMP I'm not even sure where this one is, or what it's close to.

CMP Anyhow, it's got a - a scarp going down through it. And looks like it goes up - it looks like flow front is what it looks like to me. Except the flow front goes up this side, the south side of the crater. It's a domical, a very subdued, eroded, domical central peak on the thing. And the whole crater is somewhat eroded except that the center - central peak is - seems to be more rounded than the crater walls themselves. Almost like it might have been an uplifted type of feature - possibly volcanic. But anyhow, the - it looks like a flow front going around there, and I'll get a picture of that on number 134 - 133, I guess, magazine Oscar Oscar.

CMP Darn, I missed Tsiolkovsky. Son of a gun! Well, here comes the flow.

07 12 52 18 CMP Sure have a lot of different albedo textures on the thing. What makes it look like a - I sure want to see that low Sun, see if that's a topographic rise over Tsiolkovsky or not, and I - looks to me like there's just a - it's just an albedo. It has dark albedo streaks in there. Maybe they are shadows, but I don't think so. Can't see - interpret. You have flow from a so-called landslide. Looks like in a spot or two there, it's rocky. It doesn't come out and roll over. It just comes out and slopes down at maybe a 45-degree angle.

CMP Eight. Yes.

07 12 54 13 CMP Okay. Let's see, just south of Roosa [sic]. Not these subdued craters that Roosa is on the edge of it, but the next one on down from that. I'll look at my map later to find out for sure what it is. But that crater is - looks like it's early Eratosthenian in age, in that the slumping along the walls is fairly fresh. There's

[redacted]

not a real apparent ejecta blanket around it, and there's a - a flow ridge down in the center of the crater. Most of - most of the bottom of the crater, though, is composed of very small bumps and furrows. This type of thing. The albedo is lightly - When the - when the Sun is sort of shining on the central peak on the thing, you can see stariations - striations running every which direction. In other words, the horizontal - you have horizontal and vertical striations on the thing of different colors. The - the dark striations in the thing are - kind of - let's see, kind of in the tannish - tannish-gray tinge.

07 12 55 43 CMP Anyhow, the bottom of the floor has a relatively - you can see flow lines in the mare flow or the mare fill of the thing. Now, what's the name of it? Oh, it's Langemak. Sure. Okay; it's Langemak. Yes, I ought to be able to get a good shot of Arabia out window 1 here. What time is it? Thirty-six - 4 minutes. I'll get one of essentially the horizon. Where is the clicker on this? Looking out across - first of all. Okay; ... 11. I'll take another shot thataway. Another shot to the west. And we'll take one out of window 3 here looking down across - 2, I mean, looking down that way. Okay; those are all f/11. Let me try the same thing in f/8 just to make sure I'm getting the right settings. What I'm trying to do on these are make a profile for the - I just moved the thing.

07 12 57 41 CMP That central - central crater down here really shows up. Central crater of Arabia is what I'm talking about. Probably be too much sky on this 80-millimeter thing.

07 12 58 16 CMP Well, let's see, I got a pan camera photo pass 38 in 2 minutes. I've got to get going on that. Crazy dark slide somewhere. Big deal. That's all I need. ... is to change my camera in a minute.

07 12 59 11 CMP Okay; the pitch and yaw is going to be coupled.

CMP ... uncoupled.

[redacted]

	CMP	One's D-1; B-2 and D-2. One in A-2.
	CMP	...
07 13 00 35	CMP	Jets are enabled. That's C-1 and C-2 for ROLL, OFF. PITCH and YAW are OFF. And, Houston, ready for PAN CAMERA to STANDBY and STEREO to POWER and all those good deal things whenever you are.
	CMP	Okay. CAMERA is - Hey! Good morning, Robert. How's it going?
07 13 01 19	CMP	(Laughter) Okay. Let's see, PAN CAMERA - that's verify STANDBY. Okay; it's going up to STEREO. Turn the old POWER switch ON. The V/H is still in HIGH ALTITUDE.
07 13 02 59	CMP	Hey, great! Okay; I ought to get my prep for transfer ready here. You know, kind of last night and also this morning as I was flying across the back side of the Moon here - been thinking a little bit, and I wonder - It seems like the - the Eratosthenian-age craters, you know, the ones that are fairly - fairly fresh; you know, they're not Copernican. They don't have rays and this type thing, but they're fairly fresh in their slumping characteristics on the inside and this type thing. But they all seem to have a mare floor; you know, a flat, mare floor - a volcanic-type floor in the thing, and I wonder if there is anybody that's kind of come up with the theory at all that maybe you had a liquid mantle during the - the Eratosthenian era of the formation of the Moon, you know? And those craters at that point in time were - were penetrating that - that liquid mantle. It's a thought.
	CMP	Must not be because I don't know for sure what you mean (laughter).
07 13 04 15	CMP	Oh, I guess the feeling that I was getting is that most of the Eratosthenian-age craters all had some sort of a mound - a domical structure down in the bottom of the crater. You know,

[redacted]

even the smaller ones, some - some of the - the 30 - 50-kilometer class, you know, have a - have either a flat floor or they look - they look volcanic on the floor. Some of the bigger ones, of course, they're definitely volcanic lava flows on the floor of these big craters. The slumping of the walls is not as fresh as the Copernican-age fra - crater but, you know, they - It's not all beat up either. Although the - the walls - the crater walls have the slumping coming down through there, and it's still fair - -

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[redacted]

(This page Unclassified)

Tape 17-03426

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 50

Time Segments (AET)

From	To
07 14 25 42	07 14 59 11
07 15 01 59	07 15 05 20
07 15 21 46	07 15 25 21

Voice fair; time good.

SECURITY CLASSIFICATION

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GROUP 4
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[redacted]

07 14 25 42	CMP	Better change back. One, 2, zip. Okay. At 08, we want 30 - two 30-seconds. At 10, two 20-seconds. 11:30. Five, 3, skip one, skip one. Okay. At 30, change to the 20. Okay. We've got the 20. Okay. At 08:30, we'll take her OFF.
	CMP	... good. (Humming) ... bad. Got the ... to SM/AC; 20-seconder. At 11:30 is a 10.
07 14 27 49	CMP	... I'm going to go to B. Okay. We move on to B at 11:50; 10- and a 20-minute.
	CMP	... 20-second. ...
	CMP	18, 19, 20. Change the shutter.
07 14 28 50	CMP	GO at 20.
	CMP	... change the shutter.
07 14 29 21	CMP	Okay. At 11:30, that'll be 10 seconds. At 13:00, a 5; 13:30, a 3.
	CMP	48, 49 - Okay, make sure we're in B. Yes. Skips every other one going -
07 14 29 55	CMP	COCK it. I think the thing started at 40 - 54. 3, 4 -
07 14 30 20	CMP	COCK it. Change the jobberdoo. Five seconds at - 13:00. Okay. Five seconds. 13:30, 13:50. Skip one, skip one. Okay. 13:00:15, 5 seconds. Okay, 30 seconds to go. Okay; and you can see some kind of zodiacal light coming up there. Looking out window - bright. I think that's Sirius. Stands out, too. ... Sirius and - 2. 56, 57, 58, 59 -
07 14 31 25	CMP	MARK it.
07 14 31 30	CMP	Five. Cock the shutter - jobberdoo. 10, 11, 12, 13, 14, 15 -
07 14 31 42	CMP	COCK it. Change the jobberdoo. Change it. Okay. The next frame's a 3 at 13:30. Okay.
07 14 32 00	CMP	COCK it. Change the jobberdoo. 6, 7, 8, ... -

[redacted]

07 14 32 06	CMP	COCK it. Change the jobberdoo. Get set. ... This thing on? Okay, it's a 1. ... Okay. Probably do it a little bit late. Okay, at 14:10, skip one stop.
07 14 32 37	CMP	COCK it. Change the jobberdoo back. It's - 30. ...
07 14 32 57	CMP	COCK it. Change the jobberdoo. Going -
07 14 33 01	CMP	COCK it. Change the jobberdoo. It's 50 - 7, 48, 49, 50 -
07 14 33 16	CMP	..., here comes the ... Good gosh, look at this ray coming up ahead of me. It's beautiful. Hey! (Laughter) Wow! ... Sun came up. Just a - a - That'll be a bright chunk sticking up there. Right at the 50, the 14:50. Beautiful sequence. Ah-ha! Wasn't that good? Oh, beautiful. Outstanding! Didn't know I could do it. ... 1/15 already. Now, let's see, where are we here? Where did we end up?
	CMP	Oh, we ended up on the 1/60. (Laughter) Now, better do a 1/1000. Beautiful job. Oh, that's good. Okay. Let's see. Cock it once. Cover it with a book, and take it for a check frame. We have a minute and 30 - 30. We ought to have enough of this thing to ... with. Whew! I'll be glad when the guys get back with the ... Not with the soap, because soap doesn't do any good ... All one time. Just need a good deodorant. Took all the deodorant with them to the surface. Outstanding stuff. Wow! I didn't think I could ever do that. Well, I'll tell you, Bob Mercer, you and ... Bob - I don't remember - Anyhow, you made it so it's a reasonable type thing to - to make. If it had been any more complicated than that, I'd have never got it. Just barely getting done. ... on the camera - camera.
07 14 36 05	CMP	... that one first, Sirius or Saturn? Whatever it is, it's just a little bit off to the right of track. And let's see now, where are we? That's on frame 30. (Humming) Gee. It's 31 - 31, I guess, once you pull it through; 30 was the last one I took of that one. That one was ... Okay, maybe I missed one of the 1-degree ones. Ha!

[redacted]

	CMP	... 28, 29, that's 24 frames. Okay. That's right. I got them all. Now, what am I supposed to be doing in the old Flight Plan? Lights up. Okay. Stow the camera. Notes: Notes: Everything worked good. Let's see. Started ... late. ...
	CMP	(Humming)
07 14 40 16	CMP	Okay. Start the old AUTO PITCH rate. I guess we did that. AUTO RCS SELECT. Jets back ON. Let's see. Where are we now? ... P20, option 5, landmark track. ...
07 14 40 41	CMP	ZERO ENTER. ... Two ZEROs ENTERED. ... ENTERED. ... Couple more. Okay. PROCEED to ...
07 14 41 09	CMP	Plus - minus, 68.00 ENTER. Plus ENTER. Zero - minus 68.
07 14 41 20	CMP	Zero.
07 14 41 22	CMP	NOUN 79 ... 0.5, okay. VERB - ... ENTER. PROCEED. Seven? That's pretty close. Okay. ... The old HIGH GAIN. ...
07 14 41 50	CMP	That's a minus 2. ... at 330. REACQ and NARROW for AOS. ... Okay. Landmark track. Guess we'd better do that. (Humming)
	CMP	That's Bravo Bravo on there. ... Okay; Bravo Bravo. Here we go. ...
	CMP	We're looking at the old lunar surface. Okay. ... turn the power off. Whoops! Well. ...
	CMP	(Humming)
07 14 44 57	CMP	... is over there. NO GO. ... well on that.
	CMP	Okay, good shape.
	CMP	... 1/250. One frame a second. ..., 38.
	CMP	Plus 18, 63. Two, plus 44.
07 14 47 50	CMP	Plus ENTER ZERO all the ... be below the lunar surface.

[redacted]

07 14 48 01	CMP	Okay. That's OPTICS POWER, ON. ...
07 14 48 47	CMP	Oh, the old check valve, and that buster's kind of tight. Lots of pressure. ...
	CMP	(Humming)
07 14 53 27	CMP	Okay. ... Okay. It turns out to be 1. - plus 1.863, plus 44 in ...
07 14 54 13	CMP	Humming. Okay. 38:00, start time. ... We're on? It ought to be ... We're on ...
	CMP	Okay. ... Swig of water, find my ...
07 14 55 10	CMP	All right, 3 minutes.
	CMP	Ouch.
	CMP	(Humming) (Whistling) (Humming)
07 14 57 14	CMP	Okay, 37.
	CMP	A little goodie.
07 14 58 06	CMP	Okay, got the old MISSION TIMER ...
	CMP	What? Okay. T-2 is at 42. ... the DAC. (Whistling)
07 14 59 11	CMP	(Humming) ..., but I guess it worked.

TIME SKIP

07 15 01 59	CMP	Oh, okay. Coming up - 42 - No, it's 41:50; I hope. I don't see it yet. Oh, okay. It's on the old DAC here. It's not seeing much. Maybe - 7 degrees. Okay. She's coming down now ...
07 15 02 39	CMP	Ah-ha, I see it. Man, it's pointing a long ways from it. It's 5 degrees up. No, not that much; 3 maybe.
07 15 02 56	CMP	Yes, DAC's running. Going to bring her down, then - Okay, I guess the best thing to do is take

[redacted]

the center of that thing, that right - It's supposed to be 10 seconds more.

07 15 03 48	CMP	That one was a little bit off. Discount that one.
07 15 04 10	CMP	58. Beautiful. Right there, right in the sextant.
07 15 04 52	CMP	Oh, I'm going through zero phase. Got it. ... to lose it. Last one. Okay. The last one may not be that good. Just lost it.
07 15 05 20	CMP	Okay. DAC is OFF. ... CMC. (Cough) (Humming)

TIME SKIP

07 15 21 46	CMP	Okay. We're passing over the Sculptured Hills. And coming in to the landing site now. Still see - I'll start the old DAC. Oh, boy, it's going to be bright down there. Long - long ways off. Whew! That's pointing up the Family Mountain.
	CMP	No, through the telescope, anyhow, the whole area down there is a lot lighter than it used to be, and I'm sure this is due to the increase in the Sun angle. However, the landing site itself and the whole valley extending on out to the Serenitatis annulus is still darker - darker than the surrounding territory, but it's - it's - with the higher Sun now. It's a lighter tan than it used to be. Come on, catch up with us there.
07 15 24 08	CMP	Okay. I got three good marks right in a row there. Just because I missed a TCA, got to catch up with him.
07 15 24 41	CMP	Last one. She's gone. Okay, in this sunlight, Family Mountain looks like it's black on the top. Not black, but real dark - dark - real dark gray on top of it.
07 15 25 05	CMP	HIGH GAIN to AUTO.
07 15 25 21	CMP	Back to POO here, huh?

# # #

[redacted]

(This page Unclassified)

Tape 17-03413

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 49

Time Segments (AET)

From	To
07 16 44 45	07 16 58 02

Very poor comm

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

07 16 44 45 CMP Okay, now I'm ... my ...

07 16 58 02 CMP Okay. That's 41 ...

# # #

[redacted]

(This page Unclassified)

Tape 17-03425

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 52

Time Segments (AET)

From	To
07 18 11 18	07 18 11 46
07 19 06 08	07 19 06 34
07 19 32 12	07 19 37 22

Time good, voice fair.

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[redacted]

07 18 11 18 CDR I can't understand it. They seem to be ... Maybe they don't, when we're in AUTO.

07 18 11 46 CDR Okay, ...

TIME SKIP

[redacted]

07 19 06 08	CMP	Okay.
	CDR	Houston, America - -
	CMP	OMNI Delta?
	CDR	Houston, America and Challenger are ... a good tight navy formation.
07 19 06 34	CMP	Yes, it is beautiful.

TIME SKIP

[redacted]

07 19 32 12	CMP	Okay, she's coming back around.
	CDR	Take your time.
	CDR	We're still free, Ron.
	CMP	Yes, I know. Okay.
	CMP	Yes, when you're free ... you create a little bit of rate on the thing, too.
	CDR	I know it, I can see that. Just take your time. When you're satisfied, go. But don't go until you're satisfied.
	CMP	Okay, I'm not. (Cough)
	CMP	Okay, she's coming back around now.
	CDR	Okay, give me a call when you start to retract.
	CMP	Okay. Will do.
	CMP	Crazy thing.
	CDR	Say again.
	CMP	(Laughter) I get the rates nulled and then it goes around the other way. I think you're bouncing around up there, too, huh?
	CDR	I know it. I'm just swinging free.
	CMP	Yes.
	SC	Here come ...
07 19 35 38	CMP	I think you're going to have to go to ATTITUDE HOLD. You're bouncing around more on the probe. See, I'm not moving at all.
	CDR	Okay. Stand by, Ron. Okay? Okay, I'm stable now.
	CMP	Okay. Now let me come up to you.

[redacted]

	CDR	When you're happy, I'll go FREE.
	CMP	Okay. Stand by.
	CDR	Looking good now.
	CMP	Looking good, yes. See, that's what I needed.
	CMP	Okay, she's looking good. Why don't you go to FREE, and we'll go to RETRACT 1.
	CDR	Okay -
07 19 36 54	CDR	MARK it. I'm FREE.
	CMP	Okay, RETRACT. Here you come.
07 19 37 05	CMP	Bang. I got all - two barber poles.
	CDR	You got what?
	CMP	Okay. (Laughter) Three grays, I mean.
	CDR	That's better. That's better. (Laughter)
	CDR	Okay. Sounded good in here.
	CMP	Yes. Sounded good in here.
07 19 37 20	CDR	Okay, Houston. We're hard docked.
07 19 37 22	CMP	Okay, safe the PYROS. ... circuit breaker.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03424

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 53

Time Segments (AET)

From	To
07 20 10 XX	07 20 55 12

Time good, voice fair.

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[redacted]

07 20 10 XX	CDR	... We got to get some of this other stuff out of here.
07 20 10 44	CDR	Does this go up on its own or in the ISA, Jack?
	LMP	On its own, I think. Just a second.
	LMP	Okay, vacuum it.
	CDR	Okay.
	LMP	It goes on its own.
	CDR	... you vacuum it? I got to get those core ... out of there and ...
	LMP	Oh, that's right. Hey, Ron.
	CMP	Yes, go ahead.
	LMP	Here comes the purse.
	CMP	Okay.
	CDR	Hey, I got some pretties in there. Now don't - don't let them come out. I've got the COAS - and the - some - ... stuff in there.
	CMP	Okay. Let's see what I do with it first.
	LMP	Hey, we need to take that clamp - utility light clamp back for John, don't we?
	CDR	Yes, you don't want to ...
	LMP	... purse.
	MS	We'll - we'll -
	CDR	Well, we'll get the big stuff out of here. And then we'll get - get stuff like that.
	LMP	You want to try to get the APA [?] up?

[redacted]

	CDR	... the tools here. Why don't we give it a try after we get this other stuff clean.
07 20 11 17	LMP	I got the procedure.
	CDR	We have to vacuum this other stuff before we send it back. Hey, Ron.
	CMP	Yes?
	CDR	5-A, that's for tissue.
	LMP	You want me to - -
	CMP	I got five - four boxes of them down there.
	CDR	You got - you got plenty?
	CMP	I got four boxes of it.
	CDR	I thought we were running short on something when we left.
	CMP	No, I've still got four boxes. ... so -
	CDR	Okay.
	CMP	I got four boxes of them left.
	CDR	Okay. ...?
	CMP	I don't think we need to.
07 20 11 46	CDR	I guess that'll be enough.
	LMP	If we run out of tissues -
	CMP	(Laughter) I don't know. You guys ... a lot. Throw them back down.
	CDR	... in there anyway.
	LMP	Okay. You want me to finish that, get the stuff out, or what?
	CDR	Well, let's just get some of the stuff out together, Jack, and then I'll ...

[redacted]

	LMP	Okay. Let me vacuum you so you can go back and forth.
	CMP	Let me put this - stuff - purse in A-8.
	CDR	Are you ready for LEVA bags, Ron?
07 20 12 10	CMP	Yes, I can take them, and then I'll put them on top of the couch here for a while - -
	LMP	Hey, gosh, there's a - -
	CDR	They're the only clean thing we've got. Let's get the clean stuff out of here.
	LMP	Let's - let's - Hey, Ron. Remember that before we - we need to vacuum the gloves when we take them out of here. Okay?
	CMP	The gloves are not in the LEVA bag?
	CDR	They are.
	CMP	Okay.
	CDR	But when we open them up, we got to vacuum tomorrow.
	CMP	Okay.
07 20 12 39	CDR	Don't you think you ought to get those bags? We ought to get those things vacuumed first. And get those put in his bag ...
	LMP	Well, it's going to be hard to work, two guys in here with those bags, Gene, is the only thing.
	CDR	Okay.
	LMP	And I thought I'd get you cleaned off ... like we did in that - -
	CDR	All right.
	CDR	You think you can vacuum those things?
	LMP	Oh, no way.

[redacted]

	CDR	This ... in the drogue here are - they got to be fit better.
	CMP	Yes.
	SC	...
	CDR	My eyes, nose, and mouth are so full of dust.
	LMP	...
	CDR	Yes, I'm not going to vacuum you until you finish with all those bags.
	LMP	Right. I agree. Better get these ... out of your way.
07 20 13 50	LMP	Was that pocket ever opened on the surface?
	CDR	No, I just opened it here, though.
	LMP	Think there's anything in it?
	CDR	Yes, there is something ...
	MS	...
	CDR	... make it clean.
	CDR	What a beautiful flying machine this is. What an outstanding flight. Ron, I could have flown all around you.
	CMP	Yes, I know. You just sat there messing around.
	LMP	Hold your ...
07 20 14 46	CDR	Dust, dust, dust. All I ever do is dust. Funny how having one of those ...
	LMP	Okay, let me clean the ... of - your other arm.
	CDR	You ought to put that light on me.
	LMP	I'd rather not. It'll show how bad a job I'm doing.

[redacted]

CDR ... worse.

LMP I don't know. Okay, let me do the other - Put up the other arm.

CDR I can't believe the control panel over there said I was going into gimbal lock - during that maneuver to burn attitude. That's a standard yaw, roll maneuver.

LMP I wonder who control was during that ...

CDR I can't believe - He knows that. The only thing - the only thing ... that machine ... is to terminate behind the Moon. I just ... final ... so I started maneuvering.

LMP Okay, let me - why don't you turn? Can you turn 180?

CDR If I work on it.

07 20 16 59 LMP Okay. Oh, that part of you is pretty good. I got that while you were working over there.

CDR Yes, and the PLSS is back there - -

LMP Okay, left arm out, please.

LMP Okay. Let me see the back to your right.

LMP Okay, Gene, now I need to work on your legs.

CDR Now let me get at the top.

LMP That's right.

CDR Oh, I can breathe up here.

CMP Hey, who's got the green - the green earphone - and the red earphone.

CDR ... up here. It's on the - -

LMP I think mine's green.

[redacted]

	CDR	- - port side - port side. So mine's red. How's that for a good Navy man?
	CMP	That's good.
07 20 17 18	CDR	Were you taking stuff out of the purse?
	CMP	Yes.
	CDR	Well, some of those - some of those other things are clean. What did you do with them?
	CMP	I stuck them all in A-7.
	CDR	Huh?
	CMP	Stuck them all in A-7.
	CDR	Okay. What are you giving me this for? We need it?
	CMP	Yes, I give it back to you.
	CDR	Yes, you - I get it back.
	LMP	Okay, keep turning.
	CMP	... you're going to have to put this dirty stuff in your temporary stowage bag - -
	LMP	Turn the other way.
07 20 17 55	LMP	Wait, wait, wait, wait, wait, wait. Okay ... let me finish back here.
	CMP	And now I forgot. Who's - who - who's green and who's red?
	CDR	Jack's green.
	CMP	Okay.
	LMP	The vacuum cleaner's got enough torque that it's hard to work.
	LMP	Okay, now turn. Whoa.

[redacted]

	CDR	Ron?
	CMP	Yes?
07 20 19 59	CDR	That SIM bay is - there's nothing wrong with it, nothing at all.
	CMP	Yes, that's what it sounded like. It's - it's ticking along, working real good. The only problem we had was that one antenna.
	CDR	No, it's not out. That temperature's got to either be a sensor or a heater because - I've got to have a picture of the SIM bay, but there's nothing there that's hot.
	CMP	Yes.
	LMP	Gene, you're just dirty. That's all there is to it.
	CDR	I know. ... that stuff ... ground in and ground in.
	LMP	Okay. Turn a little more, please.
	CDR	Ron, that rendezvous was like a charm. That LM is just absolutely incredible.
	CMP	Yes. Hey, just running right up the pike. Man, oh, man. Yes, that's the way it ought to run. I didn't have to do anything. I just - keep you in the middle of the TV picture, you know?
07 20 20 16	CDR	And you know, they said that was the last but the best, and they're right. It is the best.
	CMP	Well, I'll tell you, it's been great.
	LMP	Well, Gene, I don't know if I can do anything more than that.
	CDR	Oh, I don't know if you can, either, except maybe - Let me put up my hand.

[redacted]

	LMP	Pretty good ...?
	CDR	Huh?
	LMP	Pretty good ...?
	CDR	Yes, not bad.
	CDR	My wrist connector, too.
07 20 21 25	CDR	Can we turn it off down here?
	LMP	Yes, you can turn it off.
	CMP	Hey, there wasn't an EMU maintenance kit in that thing.
	LMP	You get - you get your MASTER ALARM every time we turn it on, though.
	CDR	Oh, if anybody got a MASTER ALARM, I just turned it on and off. What do you want? An EMU maintenance kit?
	CMP	Yes, it wasn't in that purse.
	CDR	I know where it is. I didn't know we were supposed to bring it back. Let me get it.
	CMP	Oh, yes. I guess. I didn't hear one that time.
	CDR	Well, you didn't spin down, Ron.
	LMP	Oh, okay.
	CMP	I didn't get any waist tether yet. Or LCG plugs.
	CDR	LCG plugs were ... because they don't have ... our LCGs on.
07 20 22 13	CMP	Oh, okay.
	CDR	How many EMU maintenance kits you want?
	CMP	Just one, I guess. Those EMU maintenance kits. ...

[redacted]

	LMP	Okay, necks ring, I got that.
	CDR	Here it is.
	CMP	Okay.
	CDR	What else you need?
	CMP	The monocular.
	CDR	I got it.
	CMP	The DSEA.
	CDR	I'll get it.
	CMP	All right.
	CDR	Stand by.
	LMP	I'm sending in my gloves. I'm going to keep my helmet on because this dust gives me pretty bad hay fever, Ron.
	CMP	Okay.
	CDR	This dust is terrible, Jack.
07 20 22 49	LMP	I'll keep my helmet bag for a while.
	CDR	Is the recorder off?
	CMP	What, this one down here?
	CDR	No. Jack?
	LMP	Yes.
	CDR	...
	LMP	Ron, here are my gloves.
	CMP	Okay.
	CDR	Where's the doggone tape recorder? Here it is.

[redacted]

	LMP	Okay. Will you pull the - Wait a minute. Wait, Gene. Did - did you take it off?
	CDR	Yes.
07 20 23 25	LMP	Well, okay. You're supposed to PULL the TAPE RECORDER circuit breaker - -
	CDR	I did.
	LMP	All righty.
	CDR	I did already.
	LMP	Is your comm - You're going to - Well, I can't talk to you guys without taking my helmet off, so I might as well do that.
	CDR	Yes, well. Jack, if you - I'll tell you, it's going to bother you. My eyes and nose and mouth are so full of dust. I talk - I'll stay on comm here a minute. Can't you do that?
	LMP	Well, okay. Let's see how it works.
	CDR	Ron?
	CMP	Yes?
	CDR	Here.
	CMP	Hey, I'm stuck under the couch.
	CDR	Your suit is so white, I'm afraid to come in there.
	CMP	Just -
	CDR	Hey -
07 20 24 58	LMP	Okay. Send that over. That was supposed to go in the purse, but send it over by itself.
	CDR	Ron, keep it up out of stuff here.
	LMP	Okay, Ron, I guess - I guess I need your decontamination bag.

[redacted]

	CMP	Which one? Both of them?
	LMP	Well, hey, your jett bag. I need your - Yes. Send it all over here.
	CDR	Jack, there's no sense dusting those rock bags off if we're going to put them in those other bags. Let's just put them in there.
	LMP	Okay.
07 20 24 38	CMP	I'll tell you, these things are pretty well airtight. Not really, though.
	CDR	They got those airtight zippers on them.
	CMP	Yes.
	CDR	So - Okay, how do we know which one goes with which?
	CMP	Well, that's the one that goes on - You mark it down there. That's A- - A-7.
	CDR	This is what?
	CMP	A-7.
	CDR	I said how do we know what bags go in here, though?
	LMP	I think it - it says. It's not easy, but it says.
	CMP	It does say somehow. Where does this thing go?
	CDR	Lunar sample container. Stow on ... A-7.
	LMP	Okay, now that - that's listed here. We need those 70-millimeter mags, Geno.
07 20 25 15	CDR	Where are they?
	LMP	Well - inside - they're in the book compartment. Here come the mags now, Ron?
	CMP	Okay.

[redacted]

	CDR	Okay, is this what you want?
	LMP	Yes - No, that's not the mags. They're in that other thing, in the bottom book compartment. No these are goodies
	CMP	I think I'm going to have to unplug ... crawl down underneath those things.
	LMP	Okay, here's - Hey, Ron?
	CMP	Yes?
	LMP	Here's a - M and N [?].
	CMP	Yes. ... - M and N.
	LMP	What?
	CMP	Okay. Just finding where the heck it goes.
07 20 26 06	CDR	Okay, Jack. Do you want this over?
	LMP	Yes, that mag bag.
	CDR	Where's the mag bag? Ron?
	CMP	What is that?
	MS	Mag bag.
	LMP	Wait a minute. Stand by.
	CDR	Wait a minute. You still have it? I got one mag to give you for that one.
	LMP	..., Ron. We got a mag in our camera here.
	CMP	Okay. Give it to me.
	CDR	There's one slot.
	LMP	... is it a Delta?
	CDR	Yes.

[redacted]

	LMP	Okay, good.
	LMP	Do we want to save the CDRs camera?
	CDR	I don't have any desire to save it.
	LMP	How you fixed for cameras, Ron?
	CMP	Oh, I just got the one.
	LMP	We need another camera?
	CMP	Wouldn't everybody get a 500-millimeter - You left that on the surface, didn't you?
	LMP	Yes.
	CDR	Yes, we don't need it, Jack.
	LMP	Well, it would be a nice backup camera. We got it up this far. That's the only constraint.
07 20 27 29	CDR	Well, how did you get these bags in here?
	LMP	Put them in the rounded end first, the dark side up.
	LMP	Boy, I can't - I can't break this one down, though. If you got some pliers - Where are your pliers, Geno?
	CDR	Well, I think Ron took them. They were in the IS - in the - in the purse.
	LMP	Ron, are Gene's pliers handy?
	CMP	Pliers?
	CDR	Yes, push that up to me.
	CMP	I didn't see any pliers.
	LMP	They were in the purse.
	CMP	I got - I got some scissors, but no pliers.

[redacted]

	CDR	Oh, here.
	CMP	Oh.
	CDR	Well, imagine scissors in there, too.
	CMP	Speaking of scissors, you never found yours, then, huh?
07 20 28 11	CMP	Huh?
	CDR	Hey -
	CMP	These are scissors.
	CDR	Well, I had some small pliers in there, Ron.
	CMP	You did? I don't remember seeing them. Let me look.
	LMP	Okay, let me make sure we got all these things.
	CDR	What do you need to break up - the camera?
	LMP	Yes, yes.
	CMP	There - some tethers there.
	CDR	Some what?
	CMP	Some - I don't know what the heck they are.
	CDR	Oooh! Where'd those pliers go!
	CMP	No, I don't think so.
	CDR	Well, here, take these mags and get them out of here ... - -
	LMP	Don't worry about it. I got it.
07 20 29 06	CDR	Why don't we try to break it down up here, Jack?

[redacted]

LMP This is the one that was in the MESA, and I'm sure they've torqued it down. The lock washer, you know. No, we go up in the ...

LMP Okay, get the APK out, Gene.

CMP Okay, mags.

LMP Okay, you got 4, 3, and 2.

CDR Here. Your jett bag to put that in?

LMP Not yet.

CDR Here's that little piece. That's in that old jett bag. I stuffed right behind here somewhere.

LMP Where's the other piece?

CDR Any more mags.

CMP Mags, here's the three.

07 20 29 59 CDR Okay?

LMP I think you got them all.

CDR Yes. There are four 16-millimeter mags in the ISA. But we're not there yet.

CMP Okay?

CDR I'll get it right now.

LMP Well, now, wait a minute. Okay, you can send them up. You got to stow them somewhere.

LMP Get the APK too, Gene. And the flag kit.

CDR OPS? Is the OPS over there?

CMP Yes, I got the OPS.

CDR You got the -

LMP Okay, I'll get that. I got to get the core stems ready to go.

[redacted]

07 20 31 41	LMP	Who's got some scissors?
	CDR	Guess who always has got them? Ron.
	CMP	(Laughter) Here they come. Up through the tunnel.
	LMP	Wait a minute. The hatch is closed.
	CMP	Oh, well, they already went up. Oh, so the hatch is closed?
	LMP	I got it. That's all right.
	CMP	Well, don't lose the scissors; I got them in the tunnel there.
	CDR	I'm coming up to get them
	CMP	Okay.
	LMP	Excuse me, Geno. I'll get - I'll get out of your way.
07 20 32 38	CDR	No problem. I just want to be the middle man ... either one of your way.
	CDR	Who's got the scissors?
	CMP	I just put them in the tunnel there.
	CDR	Okay, take them back, Ron.
	LMP	Yes, we got it.
	CDR	Here.
	CMP	Yes, toss them back down there. I can't get to them, right now.
	CDR	Well, I got a couple of things for you. Yes, right. You can't.
	CDR	I got a 16-millimeter mag for you and the APK.
	LMP	Did you get the flag kit?

[redacted]

	CDR	Huh-uh.
	LMP	Oh, you didn't hear me.
	CDR	I heard you. What flag kit?
	LMP	Behind the SRC.
	CDR	There's no flag kit.
07 20 33 21	LMP	Well, it's on the list.
	CDR	Well, there is no such thing as a flag kit. That's the OPK. Isn't there an OPK there? No.
	LMP	Oh, okay. I didn't remember whether they put one in the LM or not.
	CDR	No, I just stuck - no. I just stuck my hand back there to make sure, but I know there isn't.
	CDR	What a clean spacecraft.
	CMP	... be.
	LMP	Oh, quit griping (laughter).
	CDR	I got silicosis (laughter).
	CMP	I don't know how in the heck these things fit in here.
	CDR	What are you trying to fit? The bags?
07 20 33 58	CMP	I should have taken them out, I guess. These LM bags in R-13.
	CDR	Well, some of them go into A-8.
	CMP	Yes, I put five of them in there.
	LMP	Hey, Ron?
	CMP	Yes?
	LMP	Did you stow the core tube and neutron flux together or separately?

[redacted]

	CMP	Oh, together.
	LMP	Okay.
	CDR	Okay, Ron, you want the 16s.
	CMP	Oh, yes.
	CDR	Okay, give me a chance ... Okay, let's put this ... on ...
	CDR	Oh, right here.
	CMP	This PPK?
	CDR	Yes.
07 20 35 29	CMP	Okay, let's put it right up here in R-2, huh?
	CDR	Yes.
	CDR	What's this bag for? Don't you want this anymore?
	LMP	No, I don't want that.
	CDR	Jack?
	LMP	What?
	CDR	We got a bag you can throw this away in? It's a - it's a 70-millimeter bag.
	LMP	Okay, throw it down here.
	CDR	Hey, Ron, stick these somewhere.
	CMP	Yes, I had them in my suit.
	CDR	Okay.
	CMP	The ones in there a minute ago.
	LMP	Well, I can't snap that. ... for snaps.
	CDR	Here, give it to me a minute.

[redacted]

	CDR	These already vacuumed?
07 20 36 09	LMP	Yes. More or less. (Laughter) Boy, let me try a little more down there.
	CMP	Okay. I got to get rid of that jett bag before I can handle those things.
	CDR	What?
	CMP	I got to get rid of this big monstrous jettison bag.
	LMP	Well, look, I'm going by the list, all right.
	CMP	Okay. I'll stick them back here somewhere.
	CDR	Well, put that back in there, Ron.
	CMP	Going underneath the couch.(laughter).
	LMP	Okay, let me - let me see what I can do.
	CMP	No, no. Hey, that's all right. I can stick it along beside here.
	LMP	I got to - tie this probe down.
	CDR	Oh, you mean that jettison bag full of stuff.
	CMP	Yes.
07 20 36 44	CDR	Oh, okay.
	CMP	You don't think that's any good, huh, Gene?
	CDR	No, I - it's - no. I don't think so - I - Let me come back to it.
	CMP	Well, that looks pretty good to me.
	CDR	Well, that probe should be really on the floor, Jack ... The probe should be on the floor ... should be tilted down towards you and then up right.
	LMP	All right.

	CDR	These already vacuumed?
07 20 36 09	LMP	Yes. More or less. (Laughter) Boy, let me try a little more down there.
	CMP	Okay. I got to get rid of that jett bag before I can handle those things.
	CDR	What?
	CMP	I got to get rid of this big monstrous jettison bag.
	LMP	Well, look, I'm going by the list, all right.
	CMP	Okay. I'll stick them back here somewhere.
	CDR	Well, put that back in there, Ron.
	CMP	Going underneath the couch.(laughter).
	LMP	Okay, let me - let me see what I can do.
	CMP	No, no. Hey, that's all right. I can stick it along beside here.
	LMP	I got to - tie this probe down.
	CDR	Oh, you mean that jettison bag full of stuff.
	CMP	Yes.
07 20 36 44	CDR	Oh, okay.
	CMP	You don't think that's any good, huh, Gene?
	CDR	No, I - it's - no. I don't think so - I - Let me come back to it.
	CMP	Well, that looks pretty good to me.
	CDR	Well, that probe should be really on the floor, Jack ... The probe should be on the floor ... should be tilted down towards you and then up right.
	LMP	All right.

[redacted]

	LMP	Say, that isn't tight, either. I didn't finish it.
	CDR	Well, to take that jettison bag, we need to have that squared away, I guess.
	CDR	Hey, you don't need to give it to him yet.
	CMP	No, I don't need it yet.
07 20 37 23	LMP	Okay.
	CDR	You're going to like this.
	CMP	That big, long ...
	CDR	That ... core tube was like pulling an elephant out of the ground.
	LMP	Okay, next. You got this SEP DSEA up there yet?
	CDR	No, I didn't unstow it. It's still over there -
	CMP	Well, get it out of the bottom boot compartment, then. And send it to him.
	CMP	I got some kind of a recorder. What was that?
	LMP	That was the LM.
	CMP	Oh.
	LMP	Okay. Send me a jett bag. A clean jett bag.
	CMP	A clean one, huh? An empty one?
	LMP	Empty.
07 20 38 15	CMP	Okay.
	CMP	A clean jett bag.
	CDR	Okay, now here's the DSEA from the SEP.
	CMP	Okay.
	CDR	Now, put those - put those in the temporary stowage bag; that's just the bootleg stuff.

[redacted]

CMP Okay.

LMP ... Okay, that all goes in the jett bag now, except the next item.

CMP Yes, where do I put this DSEA? Maybe in that thing.

SC ...

LMP You can work on that. Stuff it in there.

CDR What you - did you take our cards off the front?

LMP Yes. I got them, okay?

CDR We - we got a checklist here to - to target the big stuff?

LMP That's in here.

CDR Okay.

07 20 39 27 LMP Man, I must - and here comes the collection bags.

CDR What else goes in here?

LMP Here's the Flight Data File right now.

CMP Okay, you never have found the waist tethers yet, right?

CDR Yes, they're there.

CMP They are?

CDR They were in the purse.

CMP Those waist tethers?

CDR I took them out of ISA and put them wherever - whoever told me to put them in there, either you or Jack.

CMP Those are not the things I used for EVA.

CDR Yes, they are. They got to be pulled apart. Well, wait -

[redacted]

	CMP	They don't have hooks on them. They don't have those big hooks on them.
07 20 40 14	CDR	Oh, the waist tethers. Those are our OPS transfer tethers.
	LMP	No, we haven't sent you the waist tethers.
	CMP	Yes, okay.
	CDR	We don't need those OPS - OPS transfer tethers.
	LMP	No.
	CDR	Why don't you send it back?
	LMP	Unless you want to keep them for something?
	CDR	Well, you want the Yo-Yos.
	CDR	Yes, put them in that - in that - where - where have you got them?
	CDR	Put them in that ... box I just gave you. All right?
	LMP	Okay, send over the jett - the Data File and then - then - Hey, Ron, you probably want to put the Data File away before we start sending you the rock boxes.
	CMP	Yes.
07 20 40 57	LMP	Or maybe - Gene, can you get that close to the -
	CDR	Yes, I can get that. Here's - here's something. I can take that.
	LMP	What is it?
	CDR	That's our decontamination ...
	CDR	I'll carry it. Put this ... away, Ron.
	CMP	Hey, this thing is supposed to be in the decontamination bag.

[redacted]

	LMP	What is?
	CMP	This thing.
	LMP	What thing?
	CMP	The de - the magnetic tape thing.
	LMP	Oh, okay.
	CMP	It's supposed to be in that decom bag.
	LMP	You're right. I don't ...
07 20 41 25	CDR	Okay, give me that bag there.
	LMP	Well, I got to find the one that goes in first.
	CMP	It goes on the one - the only one I passed over there.
	LMP	That whole bag?
	CMP	Yes, the one that goes on A-7.
	CDR	Okay, here you are, Jac-, coming back.
	LMP	Nothing else goes in here?
	CDR	Oh, yes.
	CMP	Oh, yes.
	CDR	Heck, yes. The SCBs go in there.
	LMP	Will you pass those back to Ron? Now wait a minute.
	CDR	Pass what back?
	LMP	These. Or that.
	CDR	What?
	LMP	Oh, I'm sorry.

[redacted]

07 20 42 00	CDR	Well, we just got to regroup here. I got to get - got to get one thing done first.
	LMP	What is that?
	CMP	Hey, you got any magazines for this camera?
	CDR	Well, there's some - yes, there's some film left on the LM mag.
	CDR	Jack?
	CMP	Okay.
	CDR	Jack?
	LMP	Yes, Ron - I mean, Gene.
	CDR	Take - take that DSEA recorder. Okay?
	LMP	Yes, go ahead.
	CDR	And put it in that bag, if that's where it's supposed to go. Now what is - what are we going to do with this?
	CMP	What is it?
	CDR	What did you send this up for, Jack?
	LMP	What?
	CDR	This black bag - -
	LMP	It was in the decom bag.
07 20 42 37	CDR	Oh, it was in the decom bag, Ron.
	CMP	Oh (laughter) okay.
	CDR	Now, where is the LM Flight Data File? Can you tell me?
	CMP	Should be in that jettison bag there.
	CDR	I know, but I wanted to stow it. Where could I stow it?

[redacted]

CMP Oh, stick it in there, yes. It's kind of an empty one to use to put stuff - We got the maps that we each pick up out of ...

CDR Yes - that's right.

CMP Was empty.

CMP This thing is really empty back in here.

CDR Where?

CMP Yes, you could get - you could push that right in that drawer. You could stick that -

LMP Hey, hey, Ron?

07 20 43 14 CMP Yes? Go ahead.

CMP This bag you sent me is - is for a sample bag, not for the DSEA.

CDR It's the big bag off of A-7.

LMP Yes.

LMP Don't you want sample bags in there?

CDR Yes. That's what it said.

CDR Does the DSEA go in there, too?

CMP "Receive magnetic tape cassette in decom bag, and stow on A-7."

LMP Okay.

CMP Yes. So the bag -

LMP I'll put them both in there, then.

CMP Yes.

LMP That doesn't ring a bell with me, but I'll do it.

CDR Both of them? There's only one.

[redacted]

	LMP	No, a sample bag.
	CDR	Oh, yes. Is there anything else to do, Ron?
07 20 43 55	SC	No. Unless the Flight Plan does ... in there.
	CDR	...
	CDR	You'd be ...
	CMP	Turn it the other way.
	CDR	What?
	CDR	Hand in the rings first.
	CDR	... the other way.
	CMP	Yes, the other way - It doesn't make any difference ...
	LMP	Hey, Ron, do you think one or two go into this A-7 bag - one or two sample bags?
	CMP	I think on that - -
	CDR	I think you try and put two in there, Jack.
	LMP	Oh, I got it. The BSLSS bag goes in there.
	CDR	Is that what it said?
	LMP	Yes.
07 20 45 03	LMP	I got the list.
CMP	CMP	"Receive two sample collection bags in decom bag, and stow on A-7."
	LMP	My list says the A-7 bag gets the BSLSS bag.
	CMP	The buddy SLSS? I guess - there's been a change. "Receive buddy SLSS bag in the decom, and stow on A-1.
	LMP	Looks like it could go either way.

[redacted]

	CMP	Yes.
	LMP	You have to go one way or the other.
	CMP	Yes.
	LMP	Okay. I'll put the - I'll put the buddy - Did they change it?
	CMP	They just changed it.
	LMP	Oh, okay.
	CMP	Just changed it.
	LMP	All right. That's because it's heavy. All right.
07 20 45 44	CMP	Yes. "Receive two sample collection bags in the decom bag and stow on A-7." That's the one you had.
	LMP	Yes. Okay, I'll do that.
	SC	Fire me.
	SC	Where?
	SC	At the Moon.
	LMP	Okay, Gene, I'm going to partially close the hatch and get a bag on it.
	CDR	That your bag or my bag?
	LMP	That's mine.
	SC	Here's your EVA [?].
	CMP	I've got to get back over there now that I've ... Is there any more 16 - are there any more 16 millimeter mags?
	LMP	No. There should have been four of them.
07 20 46 56	CMP	Okay, maybe I got them.
	LMP	Okay, I pulled that zipper as tight as I can pull it.

[redacted]

	CMP	Okay.
	LMP	Here comes the A-7 bag.
	LMP	I could use another decontamination bag, if you got one.
	CMP	Okay, I got one.
	LMP	Oh, should I put the DSEA - I'll put the DSEA -
	CMP	Yes, put the DSEA in there.
	LMP	Yes.
	CMP	Or the mag tape recorder, or whatever you call it.
	LMP	Yes.
	CDR	That's all the LM Data File stuff, except these two bags here.
	SC	...
	SC	...
07 20 48 14	CMP	There's - there's room in R-3 there.
	CDR	I hope there's nothing you need out of it.
	LMP	Hey, Gene, you want these - There are two more clips out here. You want them?
	CDR	No, the clip bag is already stowed.
	LMP	All right.
	CDR	Put them in your pocket, if you want, but -
	CDR	No, can you stand this up here?
	CDR	No, I can't -
	CDR	Hold that until we need it now.
	CMP	Okay.

[redacted]

	CDR	Okay, Jack. What have you got?
	LMP	I got an A-7 bag with two sample collection bags and one mag tape. And I'm ready for another decontamination bag.
	CMP	Okay. Let me get it for you.
07 20 49 09	CMP	Whoa! How many rocks you got in that thing? (Laughter)
	CDR	We figured we had (laughter) - we had over 300 pounds of weight because of the dead weight of the SRC.
	CMP	They weigh as much as my jettison bag.
	CDR	Okay, Jack. Hey, wait, there's something in there, Ron. All sorts of things in here. Let's get them one at a time.
	CMP	There's supposed to be a whole bag.
	CDR	Yes, but he can't handle them all.
	CMP	Oh, he can't handle them all?
	LMP	No. Just hand me one, and I'll figure out what goes in it.
	CMP	Okay. They all go in it. They all end up in it. No, they don't either.
07 20 49 43	LMP	You got the A - the ISA bag - I mean the A-2 bag. I'll put the ISA in it.
	CMP	That's the big one that's on the - the outside there, Jack.
	CDR	That's right. This is it. Stow it ... and that's this one.
	CMP	Okay.
	CDR	Oh, let me see. Jack, the - Was something else in there - Oh, yes, we got ... and stuff in there, don't we?

[redacted]

	LMP	Yes.
	CDR	Well, I guess we ought to just leave all that in there.
	CDR	Well, I don't know if we did or not. We got ... and shoes. That was on my list of - crew list to bring back anyway, so just leave it in there.
	CDR	Ron, can you hold onto these?
	CMP	Yes. Toss it back here, Gene.
07 20 50 34	CDR	This is that bag - magnetic tape that ... Fold back, wrap with cord, secure with ..., stow in A-7 ... This one bag.
	CMP	Got to get this one.
	CDR	This one.
	CMP	Oh, what is that? Oh, that's what you should have put the mags - (laughter) mag cassette in.
	CDR	Well, you got it up here now, don't you?
	CMP	Yes.
	LMP	Ron, I thought that was true, and you told me otherwise.
	CMP	Yes. That's what they said.
	LMP	You buy it.
	CMP	Okay. It's what my - my thing says.
07 20 51 06	CDR	Is that an update?
	CMP	Huh?
	LMP	I put the cuff checklist in the ISA.
	CDR	Okay.
	LMP	Let's see what else ought to go in there.

[redacted]

	CMP	I need to put the tape in this bag, is what you're saying? The tape is loose in there.
	CDR	Yes, it's supposed to go that - in the bag.
	CMP	In the A-7 bag?
	CDR	Yes.
	CDR	Where in the A-7 bag is it, Jack?
	LMP	It's in the end of it, the zipper closure end.
	CMP	Okay.
	LMP	Stuffed in there.
	CDR	Okay, that's the biggie, huh?
07 20 52 12	LMP	What's the biggie?
	CDR	Can you make that one?
	LMP	I think so. I hope so.
	CDR	Something heavy is in this bag.
	CDR	I'm not sure we're going to make that.
	LMP	I'm not either. Maybe I better take the - -
	CDR	Let me - let me squeeze it ...
	LMP	Let's take it. I think we might make it.
	CDR	Stuff it back into this end of the bag. There you go. Why don't you try and hold on together? Here, I'll show you. I'm going to get it.
	LMP	...
	LMP	Watch it. Did it get you?
	CDR	No.
	LMP	Okay. Going to get it fixed first.

[redacted]

07 20 54 49	CDR	Ron?
	CMP	Yes.
	CDR	Ready for the ISA bag?
	CMP	Okay.
	CDR	Says, "Stow on top of A-" - Where do we sleep going home?
	CMP	Darned if I know (laughter). I've been sleeping floating around in the tunnel.
	CC	...
07 20 55 12	CMP	Hey, okay, Houston.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03429

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 52

Time Segments (AET)

From	To
07 22 09 21	07 22 53 18

Comm fair; time good.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

07 22 09 21	CDR	Okay. We have a latch.
	CDR	You get direction? Yes, all right. Okay.
	CDR	Yes, if they will.
	CDR	(Laughter) No, because - Yes, that's right. Both the same pressure; I don't see how it makes any difference.
07 22 39 51	CDR	Yes, it was dead, probably. You all didn't turn it off until later.
	CDR	Yes, that tees me off. We're not going to get a picture one out of this darn thing. It's jutting right into the Sun.
	CMP	Okay; P30. I've already got that. Al, what's supposed to be done about 12. It's 20 NOUN. I've got the camera configured. I'm already at P30. No, it's at time 93:12 - 93:21. ... behind you to your left. Okay; suit integrity check. Yes, I was just going to go ahead and put mine on and do a suit integrity check now. Then we'll be ready. Now with that check. Gene, can you get up there in the back - over in the corner back over there? Jack's Roger. We're going to get all set. Yes, that's it.
	CMP	Okay; I've got my helmet on.
07 22 43 22	CMP	Now? Can you hear me now? Now?
	CDR	I hear you now. What are you doing?
	CMP	Okay, Gene. We're just talking about the integrity check. We're not suited yet, Gene, if you read me? ...
	CDR	What - Ron, what's it look like on the checklist?
	CMP	Well, we're 23. We've got - we've got 30, really.
	CDR	Okay. Well, tell me when you want to - you want me to put my helmet on. I'll put it on. I'm just waiting - -

[redacted]

CMP We can go ahead and do that right now - get it out of the way, if you want to, while we wait for that thing to come down. Then we - then we'll be set.

CDR Well, you shouldn't do it while we're venting the tunnel in case the tunnel is venting. That's the problem, see?

CMP Well, that's right, too.

CDR It's getting there.

CDR You know that - that sort of - It eats - just eats - eats the skin off my hand.

CMP (Laughter) Sure as heck does, doesn't it? But part of that is just from working inside the glove, isn't it?

CDR Yes, a good part of it is. How did we end up on decrease here?

CMP Darned if I know. The last purge was only 20 seconds long, and I think it probably didn't - didn't work in there right. But they wanted me to go to DECREASE just prior to burn. That's DECREASE, so I think it probably didn't work right.

CDR Yes, it didn't look very good when I was ...

CMP Yes. And ... I haven't learned that much about the ... You know, I never - I've never seen the darn thing.

CDR O_2 flow's not increasing on the CSM?

CMP No.

CDR Okay.

07 22 46 45 CMP Did you - did you turn my suit flow off for a little bit?

CDR No.

[redacted]

CMP Okay. I'll put my gloves on. No. Wait a minute. It's not time yet.

CDR I'll go put a helmet on here.

CMP Okay. Turn it on.

CDR I never turned it off. You want it on or off?

CMP I guess I got the glove on without turning it off. That's all right.

CDR I'm in a tunnel integrity check right now.

CMP Okay. ... T8, 1/250. I think it's T8. I'm looking in the darn Sun. T8.

CDR Wow! I wish I could have got that other hand controller.

CMP Maybe those nuts are just stuck on today, huh?

CDR They are those screws, and they - they're just so darn hard that all you do is tear the head of the - head of the screw apart - -

CMP Yes.

CDR It's about a half an inch to the bulkhead - you know, where you try to grab the screwdriver.

CMP Yes.

CDR And it's a rounded screwdriver. It's not one of those - it's not one of those square - squarehead screwdrivers.

CMP Yes.

CDR It's a rounded blade. Okay. Tunnel integrity check is good.

CMP Hey, okay.

[redacted]

07 22 48 55	CDR	That's on - Let's see, O_2 FLOW is still in INCREASE, right?
	CMP	No. Still zero. Okay. Lower limit.
	CMP	Hey, is that DELTA-P about 2?
	CDR	No, DELTA-P is already about 35.
07 22 49 16	CMP	Oh, 35. Oh, okay.
	CDR	Well, that's all I've got to do. Tunnel that valve. I leave it on vent.
	CMP	Yes, just leave it on vent for 10 minutes.
	CDR	Just leave it there, huh?
	CMP	No, no, no. Not that. We'll have to get it to OFF before we jump. Otherwise, the - leak the - -
	CDR	Leakback, yes.
	CMP	How about ...?
	CDR	Can't.
	CMP	Can't. Okay. You're right. We still want it off. We still don't want it in VENT. ..., couldn't we?
	CDR	Okay. What's our time line look like now?
	CMP	Okay. We're at 30 minutes, and that should be a P30. Okay. And there's, let's see, 23 - 29 minutes from jett - 28 minutes from jett.
	CDR	Okay. When is AOS? How soon?
	CMP	AOS is in 4 minutes.
	CDR	What do I want for AOS?
	CMP	Pitch, minus 42; yaw, 349.

[redacted]

	LMP	I think it's about time ...
07 22 50 19	CDR	Ron, you can probably do your integrity check now, if you'd like to, since the hat - hatch is GO.
	CMP	Okay.
	CDR	Wait till I get my gloves on.
	CMP	Okay. You guys ready down there?
	CDR	Any time.
	LMP	Yes, any time.
	CMP	Okay. Stand by.
07 22 50 55	CDR	Okay. One's ON.
	CMP	Okay.
07 22 51 07	CDR	And two's ON. Okay; any time.
	CMP	Okay. You ready to go to PRESS?
07 22 51 12	CDR	Yes. Go ahead.
07 22 51 17	CMP	Okay. SUIT CIRCUIT RETURN VALVE, got to close it first.
	CDR	Darn, it's hard to close. I forgot about that.
	CMP	Okay. SUIT FLOW VALVEs; are those OFF?
	CDR	Yes.
07 22 51 31	CMP	... Okay. Suit pressure ... O_2 FLOW is lower limit. Okay. Let's go to PRESS. Okay. It should be going up.
	CDR	I don't have my dust covers on it (laughter).

[redacted]

	CMP	... Turned DIRECT O_2.
	CDR	What?
07 22 52 12	CMP	Now it's going up. Okay. I turned the DIRECT O_2 ON. And when I get to about 1-1/2 above, ... SUIT CIRCUIT RETURN.
	CDR	Did suit circuit come out?
07 22 52 31	CMP	Yes, it's coming out now. That's 5; that's 6-1/2. Okay. It's out. Now she's back in. Okay. Circuit - The SUIT CIRCUIT RETURN is going to ...
	CMP	Don't look bad.
	LMP	Man, yes. I'm at 35.
	CMP	How are yours?
	LMP	Fine. I'm at 39. 40. Hey - -
07 22 53 04	CMP	Make sure your DIRECT O_2 is OFF. The other day mine went up to 45.
	CDR	That's because you let it go to far.
	CMP	No, it just goes that high. Doesn't make any difference what you do.
	LMP	I'm at 40.
	CDR	I am, too.
	CMP	So am I, right now.
07 22 53 18	CDR	Okay. We - -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03431

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 55

Time Segments (AET)

From	To
08 00 06 03	08 00 44 18
08 00 45 45	08 00 57 36

Time good; voice fair for first segment, poor for second segment.

SECURITY CLASSIFICATION

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[redacted]

08 00 06 03	CMP	Okay. We'll give her a try. I can see the one out window 1. Window 1 is the only one I can see. And that happens to be HF number 1.
	CMP	Yes. Oh, here's those. The electrical covers? Oh, they're - each one of them is in your - your bag here. Yes.
	CMP	Yes, they're in the pocket of the PGA. Yes.
	CMP	Okay. We're LOS.
	CMP	Yes, we snap them up in the tunnel. Small pocket? Okay.
08 00 09 29	CMP	No. Well, it's back down. Back down, pull the seat back towards you. ... down, yes. No. Face up. No, that's all right. Like that. Put it right in the couch and push them on in through there. Yes.
	CMP	Yes, we're going to have to take that rock bag out of there ... And - and then the rock bag?
	CMP	No, what we'll do, we'll - it'll - No, you store it between the - the PGA bag and A9 rock box. See? Stuff it right in there. And you can start dumping ... here. Yes.
	CMP	(Laughter) Yes.
	CMP	What are you doing? Here, grab ahold of the end of it. No, just grab ahold of the end of it and pull on that, if you can. (Laughter) Yes. (Laughter).
	CMP	No, it goes up over that thing, that hard thing down there. Take a look down there. No, it goes up over it. Yes.
08 00 13 43	CMP	That was the LM Timeline book. Yes, you're at the end now. Yes. And speaking of -

[redacted]

CMP I'm sticking that LM Timeline book in there with the window shades. Oh, okay (laughter).

CMP Everything is in R-2. Oh, the cards - Yes, they're in another one. Yes, that's in - R-5 there, isn't it? Yes, that's not - yes, R-1.

08 00 16 11 CMP Those pills can come out. I just stuck them in there so they wouldn't be floating around.

CMP Here's the plan that goes in that pocket - in the end of that pocket thing the next time you get in there.

CMP Hot dang! I'll tell you. You guys have been down to the Moon. Fantastic. I don't believe it either. Yes, I did; I'll tell you. Well, I'll tell you, I learned one thing. The landing site area that you guys landed is completely different than the rest of the annulus - the rest of the Moon, the rest of the annulus around Serenitatis, and the different color. And - I'm beginning to get the feeling that - that a liquid mantle at some time or another did cross - did cross on the back side, anyhow, at one time or another, recently, during a period of time. It's in that - in the PGA thing down there, I guess. Same place, in that little - ... It's already reached the point where - I've already shaved once, though. Yes, that's right. I really was going to shave yesterday, and I just didn't have time. Packing that darn bag full of stuff, it took me an hour last night. I sure packed that bag full (laughter). Yes. (Laughter) Well, you know, it's all of that food, urine, and - LiOH cans out of there and my CMP's helmet shield and a bunch of stuff out of A7, all the rest of the food and stuff that was in there.

08 00 19 09 CMP That belongs in A8, but I just stuck it down there for the time being. No, I know they don't fit in there, but they did while something else was in there. Yes, in fact, I've got something on both sides of the page to do. What time is it? Okay. ...

[redacted]

	CMP	What? Tissues? Let's see, they're down in the corner over there. What the heck did I do with them? Aren't they stuck to A-5?
	CMP	You know, this zodiacal light is really kind of pretty. It ... one of them. Thank you. ... before I even take a bath.
08 00 23 42	CMP	You guys are making a ...
	CMP	...
	CMP	Gosh darn! (Laughter) That's the one we ought to have thrown away (laughter).
	CMP	Okay. The recorder's - Yes.
08 00 27 08	CMP	Got to get the SM/AC POWER, OFF. ...
	CMP	Oh, you dumping? Do I go to the other side to get the - Has - the Nikon? Here, I forgot where I put it.
08 00 31 14	CMP	I stuck it right there with mine. Yes. You might start using one of them there, probably, before tomorrow. The box is about full. Yes, I think ... You guys don't have to start using those until 195. About now, I guess. ...
	CMP	No, not to - not to use the spare one. You can - Look and see, ... 197? Okay. Back over there in the right corner? Back over there and down there, somewhere. Leaning up against the wall. Yes. Yes. ... Just about this period of time, see, you can always dump - with the back side of the Moon coming up. I was in FREE one time coming around, and I dumped on the back side of the Moon. Almost went into gimbal lock (laughter). It really fouls you up.
	CMP	Polarized and also red ...
08 00 34 00	CMP	Where did I put that thing? Let's see; I wadded it up. Let's see - It's down in that one over there?

[redacted]

	CMP	Yes, I want to get - Well, ... this would be good ...
	CMP	It was the other plus X. ... terminator yet ... I got ... near-side terminator ... terminator.
08 00 35 42	CMP	No, there was another - No, there was another one in there. Just like those temporary storage bags.
	LMP	Wasn't it down in there?
	CMP	I took it off of there. What in the heck did I do with it? I forgot what I did with it now. Fine.
	CMP	Oh, I got something on the outside of my window. How did all that happen?
	CMP	We could start using that great big thing; but it's just easier to use that small one and then dump it in there, I think.
	CMP	Might as well just start using that big one, I guess.
08 00 37 51	CMP	Yes, that's the bad part about it.
	CMP	Got two pockets of towels in there, too. *** have two packages left, each, in - number A-1. ... There's a fourth temporary stowage bag if we can find it. You know, just stick it up there in the tunnel with the rest of them.
	CMP	... Kilo Kilo ... that one, I think. Oscar Oscar is ours, and Peter Peter is ...
08 00 42 16	CMP	Look at the holes in my camera holder.
	CMP	Yes, look at that flow ... Yes, look at that flow ... Where did it go? Yes, see that flow that's coming down right there now? And it happens right over Tsiolkovsky, coming close to it. And it looks to me like it's about the same darn type of stuff as - as the ... Yes. Yes, it's right out here. See it out window 3. See it down there? ...

[redacted]

	LMP	But I can't see any flow ... at all. No, here. ...
08 00 44 18	CMP	Yes ... DSE.

TIME SKIP

08 00 45 45	LMP	... down there. ... number ...
	LMP	Yes, ... number 16.
	LMP	Stand by. Must be a ...
08 00 47 21	LMP	(Laughter) ... Yes. ...
	CMP	Hey, that's my flashlight I want. Has it got tape on it? ... and the other one just quit right now.
	LMP	No, not yet.
	CMP	Sixteen. Yes, those two off ... come out and ... come out and ...
	CMP	Oh, here's that jett bag. (Laughter) There he is. Ought to put it somewhere.
	CMP	Oh, my windows are fogging up ...
	CMP	Jack, ...
	LMP	38, 34 -
08 00 51 41	LMP	Okay. MARK.
	CMP	There we are at OMNI Charlie.
	CMP	Okay. Houston, this is America. Okay. For your planning purposes there, - I got a little tied up and started the RECEIVE ONLY, TAPE RECORDER at 195 plus 24.

~~CONFIDENTIAL~~

	CMP	Okay, Houston. HF number 1 is sticking out where it should stick.
	CMP	... Look down that way. Okay. What, - stand by. Okay. STANDBY.
08 00 54 28	CMP	Okay. We're - we'll - we'll stand by on your call then. Or I'll go to VHF now, if you want. Or would you rather have HF RECEIVE? I'll stand by on your call to go to VHF.
08 00 54 57	CMP	Okay. MODE's in VHF.
	CMP	Houston, America. What - Is somebody kind of afraid that maybe the antenna isn't all the way out? Is that what the problem is?
	CMP	Okay.
	CMP	I don't think I ever told you down there - that mag Kilo Kilo was on frame 99 at the end of the rendezvous - and the picture-taking sessions there.
	CMP	PITCH of plus 25; YAW, 200; and REACQ and NARROW.
08 00 57 36	CMP	Pitch of plus 25. Okay. Okay.

# # #

~~CONFIDENTIAL~~

[redacted]

(This page Unclassified)

Tape 17-03441

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER HSK DURING LUNAR ORBIT 56

Time Segments (AET)

From	To
08 02 39 12	08 02 52 14
08 02 57 01	08 02 57 26
08 02 58 19	08 03 06 25
08 03 42 00	08 03 42 32
08 03 43 05	08 03 48 15

Time good, voice poor

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[redacted]

08 02 39 12	CDR	Pardon me?
	CDR	Find anything wrong with that?
	SC	...
	SC	...
	SC	...
	CDR	I'll tell you what I thought.
	LMP	Everything - everything ...
	CDR	Should be an opening already because I've been getting ...
	LMP	... now, right in here is ...
	CDR	Well, those doors are supposed to be open.
	SC	... my mind ... Here comes one.
	LMP	Very interesting. Can't be.
	CDR	Yes, okay, then what - what were they afraid we wouldn't retract on it?
	SC	...
	CDR	No, there was nothing taken out.
	LMP	... after every ...
08 02 43 57	LMP	Ron, that lamp was absolutely perfect for powerup.
	CDR	Who?
	SC	... that lamp.
	CMP	...
	LMP	(Laughter)
	CDR	... at the end of our EVA, huh? Well, I don't know how it went. I hope it went all right.

~~CONFIDENTIAL~~

	CDR	When we - we were out on the surface and you were laughing away on your usual VOX.
	CDR	Could you - did you - did you ...?
	CDR	Yes, that's another thing that was outstanding was the comm. And I don't know how my primary PLSS would have been, but my secondary PLSS was pretty darn good. My backup PLSS. Gee, I hope we brought back the good ... bags, Jack. Gee, did you check it?
08 02 46 15	CDR	Well, I just brought the one that was floating in the - in the tunnel? And I had to take the one off on the one side in order to get the - Yes, but the only reason I took - took the one off on this side over there was to get the probe and drogues out, and that was - we should have taken that other one. Oh, nuts. Oh well, you can do EVA ... can't you?
	SC	...
	CDR	I don't think my suit can stand another pressurization. I can't believe I'm eating as much as I am. I'm starved. Whew. I'm rather glad this is the fourth day.
	SC	...
	CDR	Well, what threw us off was that first day was about 23 hours long.
	SC	...
08 02 47 41	CDR	There's some in the LM.
	CDR	Well, that's the convenience of one-sixth g, that's what I think. I'll tell you, that's the greatest part of it.
	SC	...
	CDR	If you like - if you like ... then when you put the ... but other than that you've got all you need ... with the added ingredient of having a

~~CONFIDENTIAL~~

bottom. I'll tell you, that Rover sure bounces you - Whew. Gosh, we were - half of our traverse was ...

SC ...

08 02 48 52 CDR My outboard foot - my toes would wrap around - around the - the floorboard over there to keep ... from leaning -

SC ...

CDR You know, it's got to be worse, Jack - it's got to be worse for you because even on level ground with the craters around, see, you don't know which line - what - what I'm thinking.

SC ...

CDR Yes.

SC Yes.

CDR It laid - it looks like it just rolled up on it.

SC ...

CDR That's exactly what it looks like.

SC ...

08 02 50 28 CDR I had hamburgers and scrambled eggs.

SC ...

CDR Yes, my hands are ... water ... put about that much water.

SC ...

CDR Yes, it didn't do much good, but it was psychologically good.

CDR Yes, and it was real interesting, too.

CDR Okay, 1 minute to LUNAR SOUNDER, OPERATE.

[redacted]

08 02 52 00	CDR	MARK. This is your friendly commander, clean and happier, back up.
08 02 52 14	CDR	Well, I'm not really clean, but it's a major step in the right direction.

TIME SKIP

08 02 57 01 CMP Okay, I think I'll put Kappa Kappa back; I've got Oscar Oscar on there. How about it if I use that. Okay?

08 02 57 26 CMP 2 and 3 are ON.

TIME SKIP

[redacted]

08 02 58 19	CDR	Hey, Bob. A quick summary on that rendezvous as far as LM performance was concerned. Handling characteristics were outstanding and pretty much the same as they have always been on LMs in the past. The APS burn - burn went nominal; the residuals on that one were actually quite big, about 744, that's feet per second - and we nulled those out and after that the midcourses were max of 1.3, then a max of 1.6 on the second one. But, after the TPI, we were coming up - up the pike right - over - right - all the way and the line-of-sight rates - actually both out of plane as well as in plane were - were zero - basically zero for out of plane and, as predicted, on a nominal curve for in plane. And it really eneded up to be pretty much of a storybook rendezvous.
08 02 59 23	CDR	No, I didn't tell them that. And we didn't get a chance to copy them down because I wanted to get them all down on tape. It surprised me after the APS burn because they were relatively large. They were 7 feet per second in X, 4 in Y, and 4 in Z. And that was, I guess, just short of a 4-second burn, somewhere around 4 seconds.
	CMP	... 5.6 on that.
	CDR	And one other little thing, we put, I think, two marks, three marks - two or three marks in the AGS - manual marks, after the last midcourse, as we'd been doing in the simulator - three marks, and Jack tells me that the range rate came right up to - right up to the actual radar - range rate - right up to 100 feet or so.
	CDR	AGS is really a pretty good system. It was right a couple of times and then it was wrong.
	LMP	It had the out of plane on the insertion - insertion out of plane right. Just about right at 7, and they gave you 9.
08 03 01 36	CDR	How can you get ...?
	CMP	Huh?
	CDR	... kept trying to get you ...

[redacted]

CMP I don't like lemon personally. (Laughter)

CDR Bob, we're all just eating away here. Anything interesting in the world news that's worth commenting on?

CDR No, sir; we were busy otherwise.

CMP Yes, I did.

CDR Of course, it's 2:30 in the morning.

CMP (Laughter)

LMP Do we gradually get back on a normal schedule.

CDR No. ...

LMP Yes, no, what?

08 03 03 21 CDR Yes, we land at 2 o'clock in the afternoon, Houston time. We get up - we get up about 6 hours before reentry, as I recall, 6 or 8 hours before reentry.

CDR Wonder how our chances for ...?

CMP Yes, sounds like we're doing all right, I guess.

CDR We haven't heard much about that for 3 or 4 days.

CMP Yes, in a little bit. Okay.

CDR No one tells us anything.

CMP You guys were too busy picking up rocks, you know, getting dirty, falling down, inventing new terms.

CDR You know, ...

CMP (Laughter)

CDR ... when Jack found the orange soil, I thought he was nuts. I - My back was to him until I turned around and saw it. And then I saw this radial band of light going up.

CDR That's hard to believe.

[redacted]

08 03 04 26	LMP	You know why I was cautious, right at first, is because I had been fooled by a reflection off the Rover orange Mylar.
	CDR	(Chuckle) Okay, we're pretty much up on that one. Just wondering, you know, Mr. Truman's been pretty sick and so forth, wondering about some of those things, but no big deal, we can - we can wait.
08 03 06 15	CMP	That's affirm. Hydrogen purge, an O_2 purge, and, would you believe, we forgot to turn H_2 purge line HEATER, OFF? We bogged down - Thank you - -
	CDR	- - for being so subtle. (Laughter)
	CMP	Pretty subtle EECOM there.
08 03 06 25	LMP	It's got to be Parker. (Laughter) Parker's good.

TIME SKIP

[redacted]

08 03 42 00	LMP	Okay, Bob, that's done. 1 and 2, OFF, and 3, AUTO.
	LMP	Okay.
	CDR	And, Bob, what time is AOS?
	LMP	LOS?
	CDR	LOS, I mean.
08 03 42 32	CDR	Yes, LOS.

TIME SKIP

[redacted]

08 03 43 05	CDR	Thank you, Bob.
	LMP	Are we going to sleep before we come around ...?
	CMP	We're supposed to go to sleep now, huh?
	CDR	I'd better take a Seconal before I go to sleep.
	LMP	I'd better get some ...
	LMP	Did you look at the back - the dark side of the ... trying to see light? Flashes or anything?
	CMP	I saw them.
	CDR	Did you? You think it was a light flash or impact?
08 03 43 48	CMP	I guess - I think it was a lot more like a light flash.
	CMP	I took pictures of the Earth.
	LMP	Where do we stand on our presleep - sleep checklist?
	CMP	We've accomplished one thing; we've cycled the fans. (Laughter)
	CDR	What do you have to find out about ...?
	SC	No, sir. I'm fine.
	CDR	How about water, guys? I want to ... until the last.
	CMP	I have got to take a bath yet, but first I've got to ...
	CDR	You seem productive.
	CDR	Your bath, Ron.
	CDR	Roger. Two minutes to LUNAR SOUNDER, STANDBY.
	CDR	Roger. 28:43.
08 03 48 05	CDR	No. No. STANDBY, 28:43.

[redacted]

	SC	You checked?
08 03 48 15	CDR	Not yet.

# # #

~~CONFIDENTIAL~~

(This page Unclassified)

Tape 17-03444

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 62

Time Segments (AET)

From	To
08 14 11 32	08 14 50 51

Time very good; voice extremely poor.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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08 14 11 32	LMP	I ought to get a new ...
	CDR	Oh.
	LMP	Our water's starting to leak a little bit.
	SC	Yes.
	LMP	Probably has lunar dust in it.
	CMP	...
	LMP	Man, that was ...
	CMP	...
	CDR	When I took my helmet off and ... I just started ... I started ... in my eyes.
	LMP	I can't believe you took it off.
	CDR	I don't like that helmet.
	SC	... your helmet ... makes any sense to you ...
	LMP	Huh? Okay ... and that's ... 10 minutes late.
	SC	Yes.
	SC	...
08 14 13 54	LMP	... working down there, Ron? I think I'm going to do it, if you agree.
	CDR	... zero ... 5 on that?
	CDR	Ron, ... 5?
	SC	... 180. ...
	LMP	Okay ...
	LMP	... now with the ...
	CDR	... turn it right, then left.
	SC	Okay ...

~~CONFIDENTIAL~~

08 14 17 03	LMP	You got some stuff there for Ron?
	SC	That does something, doesn't it? ...
08 14 20 45	SC	All right.
	SC	Okay.
	CDR	POWER, ON.
	SC	What? ...
08 14 21 17	LMP	It's ON ...
	CMP	... 2, 3, 4.
08 14 22 35	CMP	Ah-ha! Got some ... Thank you. (Laughter)
	CDR	... I think we got exactly ...
	LMP	... two ... that ...
	CDR	Yes.
	LMP	... can't see it ...
	LMP	... you get some ...
	CDR	Well ... do that ...
08 14 25 21	CMP	Ah-ha! ...
	LMP	... R ... (laughter).
	SC	... change attitude ...?
	LMP	... yes.
08 14 28 31	CDR	... pinpoint the holes ...
	CMP	Okay. Magazine ... all covered up.
	SC	Clear as heck ...
08 14 29 30	SC	... way down there ...
	LMP	... circle.

[redacted]

	CMP	Oh, I got ...
	LMP	... another basin down here. Another basin coming up.
	SC	... get that.
	SC	... over there.
	CMP	Yes ... isn't it? ... Look out down that way ...
	LMP	Can't you do the - ... should do that I guess. We got ... coming up here ... on the ... See?
	CMP	Yes. ... done that ... Tsiolkovsky.
	SC	Yes.
08 14 32 11	LMP	Yes. I think if you look down there, ... just a block of the rim has been displaced in the direction of the slide.
	SC	What? Where? You get it?
	SC	Yes.
	CMP	Tsiolkovsky is about 150 miles - 200 kilometers ... and ...
	LMP	... There is a place where you can barely see some of those ... in the ... ridge and valley ... I guess the ...
	SC	... the landing site ...
08 14 34 44	LMP	Thirty - 1, 2, 3, 4.
08 14 34 47	LMP	OPERATE.
	CMP	Okay.
	LMP	On time.
	LMP	You mean the - that's probably a so-called ...
	CMP	Okay, Jack ...
	LMP	Okay.

[redacted]

	LMP	Yes, yes, yes, yes. Well, I think you do on big craters ...
	LMP	I think the - the ... is about the size of basin where you start to see that Fra Mauro type yellow [?] ridge and valley ... ridge and vale expression - construction ... Orientale, you know, shows a very - Yes, and that is ... might have been ...
08 14 37 59	CMP	... we only have one ...
	CMP	Could you guys see that crater I was talking about?
	SC	No.
	LMP	... by George. That looks like an outer ring ...
	SC	(Humming)
	LMP	... has an outer ring, about a third of a crater, inner crater diameter outward ...
	SC	(Humming)
	LMP	... waiting for ...
	CMP	... Why don't get ...
08 14 41 35	LMP	Wish I could see the ... these other. You can't make a good solid data comparison without having ...
	CMP	That's right.
	CMP	(Humming) I've forgotten which one's which.
	LMP	Yes ...
	CMP	... and ...
	CDR	There's ... Oh, fantastic. That's the first one I've seen. Out 5. Beautiful, beautiful. Look at that ... Look at that - Let's get it the next time around. ... in this attitude, Ron?

[redacted]

	CMP	Yes.
	CDR	Yes. Let's - Yes, that's - Oh, man! Look at that.
	CMP	I don't know, I've looked ...
	CDR	Yes. ... a little late. We needed it just when it came up. Yes, let's make sure we do that. That is beautiful. It's just unbelievable.
	CMP	(Laughter) ...
	CDR	Fantastic!
08 14 44 51	SC	Okay, you want Smythii, huh?
	SC	Yes.
	SC	Okay ...
	CMP	Okay ...
	CDR	... What does that clock ...?
	CMP	27 ... PAN CAMERA, ON ... 27:36.
	CDR	What is it now?
	CMP	25:17.
	SC	... at 25 ...
	CDR	... Ron? ...
	CMP	No, not ... Okay, it's ...
	CDR	What is that? PAN CAMERA, ON?
	CMP	... yes.
	LMP	27 what?
	CDR	Okay, 27:36. You got another - another minute.
	LMP	Okay.
	CDR	... by now.

[redacted]

08 14 46 49	CMP	Okay, we got you OMNI D ... Somehow we got off attitude here ...
	SC	Okay, hand it - You got it?
	CMP	Okay. You want to get the pad? ...
	CDR	Okay, Bob.
	CMP	27:36 - 27:36, Jack ...
	CDR	Go ahead, Bob, on the pad.
08 14 47 33	LMP	PAN CAMERA, ON.
	SC	Okay, ... 36?
	CDR	Pan camera what?
	CMP	STANDBY; PAN CAMERA, STANDBY.
08 14 47 48	CDR	Okay, PAN CAMERA, STANDBY.
	CDR	Okay, I've got T-start of 49:04 and T-stop of 51:01.
	CDR	I don't have much to do, anyway, Bob. Why don't you go ahead.
	LMP	I think Ron's got something to say ...
	CMP	Yes, I'm ...
	CDR	Okay. That's right ...
	CMP	Okay, we're coming across Mare Smythii. One of the first things I'm concentrating on is the - slope of the - Well, we're out of comm, it looks like.
	CMP	You got some high gain angles?
	SC	... if I do ...
	SC	... not quite the attitude.

[redacted]

	CMP	Okay.
	CDR	How do you read, Bob?
	CMP	Okay. Houston, how do you -
	CDR	Okay.
	CMP	REACQ AND NARROW, Gene.
08 14 50 51	CMP	Okay, Houston - okay, Houston, on the - the craters to the north of the Wright Brothers, the slope of the walls is steep - probably 45 degrees on the inside; it's a gradual slope on the outside, slipping - -

# # #

[redacted]

(This page Unclassified)

Tape 17-03433

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBITS 61, 62, AND 63

Time Segments (AET)

From	To
08 16 19 15	08 16 25 48
08 16 39 42	08 16 43 22

Voice faint; time good.

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[redacted]

08 16 19 15 CDR ... in there for now is some time between now and TEI.

CMP Yes, I guess it would.

LMP Yes.

CMP VERB 83 won't work either.

CDR Yes, it will.

CMP ...

CDR Yes, you can go ahead - you can - what do I have going? Huh? I don't have anything going now. Yes, you can do it. It just takes a long time. And screws it up a little bit because it's got to calculate the state vector and bring it up on the ... - -

CMP ... Okay, now how are these ... VERB 58 ...?

CDR No, just roll, I think. You've still got P21.

CMP ...

CDR No, no; 83.

CMP I can?

CDR Yes, you're done. Simple.

CMP Yes.

CDR Supposed to be. Should be the same as - should be the same as your NOUN 22. And VERB 62, I think, is over there. VERB 62 ... where it wants to go. And so long as it keeps changing, we're in good shape. (Humming)

CMP Okay. ... Okay; now get ...

CMP Turn the DSE to STOP. ...

CDR No, it's going.

CMP ...

[redacted]

	CDR	Okay.
08 16 22 09	CDR	Okay, now. UV is - UV is CLOSED.
	CMP	Okay.
08 16 22 16	CDR	It's gray.
	CMP	... stop ... camera ...
	CDR	Stop?
	CMP	Yes.
	CDR	And (cough)
	CMP	Right here. Okay. May have - Ah-ha.
08 16 25 23	CDR	Okay; going OPEN. Here comes the old terminator.
	CMP	... once.
08 16 25 48	CDR	Okay. That's done.

TIME SKIP

08 16 39 42	LMP	Okay. For acquisition at 22, you want OMNI Bravo.
08 16 39 49	CDR	Okay. We got it.
	LMP	Okay.
	CDR	Anything else coming up?
	LMP	Oh, no. ... OMNI Bravo ...
	CDR	Is Ron up?
	CMP	Yes, I'm up.
	SC	... (cough)
08 16 40 20	CMP	Okay. We're going to do a P20. Let's see, we're looking - be in a P20 now. What time is it - 20?
	LMP	... - -

[redacted]

	CMP	I'll get it set up here.
	LMP	- - ... over all these darn ..., just like you - -
	CMP	Yes?
	CDR	... about the space program is the smell of the oxygen when you put on the - on the - -
	CMP	Suits.
	CDR	Yes, on the suits. But the - the carriers, the ... - -
	CMP	Oh, yes.
	CDR	- - ventilators - -
	CMP	Ventilators.
	CDR	- - The smell of ... in ... is ...
	CMP	(Laughter)
	CMP	Yes. You are. Spit your gum out, just like I do. Yes, when it gets you.
08 16 42 03	CMP	270 ... AOS, 39, pretty quick here. OMNI Bravo?
	CDR	Yes. ...?
	CMP	It's probably Pasteur or ...
	LMP	...
	CMP	... Is that what it is?
	LMP	...
08 16 42 51	CMP	Okay, Houston; America here.
	CC	...
	CMP	Hey, Gordo, good morning - or afternoon, I guess, isn't it?

[redacted]

	CDR	... the OPTICS.
08 16 43 22	CMP	Yes, we want to PRO on that at 26.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03432

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBITS 63 AND 64

Time Segments (AET)

From	To
08 14 24 40	08 14 25 21
08 15 55 02	08 16 25 25
08 16 39 41	08 16 43 29
08 18 23 22	08 18 42 10
08 19 55 56	08 19 58 44

Voice and time good.

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[redacted]

08 14 24 40	SC	(Cough)
08 14 25 21	CMP	Ah-ha! Got to keep going for a little bit. Here comes the old terminator.

TIME SKIP

08 15 55 02	CMP	(Laughter) Am I supposed to have it on?
	LMP	Better got to get ahead. I saw that ... alterations area - you know, that funny spot - -
	CMP	Yes.
	LMP	- - on that pass.
	CDR	Farouk kept saying that was a - a - a high area. And it never looked like that on the photograph, and it still doesn't look like that. No.
	CMP	I don't know - which one - right here?
	CDR	Yes, that crazy spot that they - keeps coming up on the orbital pictures. And then they finally found ... picture. I don't know what you call it ... You call it something else ...
	CMP	Oh.
	CDR	You've got a visual ...
	CMP	I do?
	SC	... No, it can't be in there.
	CMP	There's only one left, I think.
	SC	... know.
	CDR	South of Sulpicius ...
	CMP	Hey, I'll take a cube something there. Am I supposed to eat? Yes.
	LMP	I wonder - -

CONFIDENTIAL

	CMP	These are - these are yours, huh?
	CDR	Yes, ... Could I have some of your ...?
	LMP	Where are those darn bacon squares?
08 15 56 38	CMP	Should be in there somewhere.
	SC	I finally found it ...
	CMP	Threw it. (Laughter) minus 20, yaw 30, HIGH GAIN ANTENNA POWER to OFF; OMNI B. AOS. Verify the DSE.
	LMP	HIGH BIT RATE verified.
	CMP	... Okay?
	LMP	COMMAND RESET.
	CDR	They want it RESET?
	CMP	Yes. They got it. How else are you going to verify it?
	LMP	I'm not; they don't want it.
	CMP	What?
	LMP	The last time I was in this spacecraft, I was told, don't do it.
	CDR	Right, Ron. Remember how I ... All you're doing is just the same way it was before. Just verify DSE tape motion. If it does the ..., then do that other stuff. Right? If it barber poles - -
	CMP	... you know, go HIGH BIT RATE.
08 15 59 48	CDR	Here it is. Verify DSE tape motion - that's all you do. Because this is the mode they put in. Right there.
	CMP	Yes.
	CDR	That's what they did. Now if it isn't; if it's barber pole, then you do that. We ... do that ... what happened to you the other day.

CONFIDENTIAL

	CMP	Right
	CDR	... you go again.
	CMP	Right, you're doing it wrong.
	CDR	You're the one that told me - -
	CMP	It doesn't make any difference if you do it now or not.
	CDR	Okay, then why do it? (Laughter)
	CMP	You can't verify that it's LOW BIT RATE unless you do it yourself.
	CDR	... that's a good point.
	CMP	Or HIGH BIT RATE. You can't verify it's HIGH BIT RATE unless you do it.
	CDR	How about the tape motion that they got there?
	LMP	I thought they set that thing.
	CDR	Okay, you're the - you're Captain America.
	CMP	Yes.
08 16 00 25	CDR	COMMAND RESET.
	CMP	See - otherwise, you don't know.
	LMP	I thought you guys - boy, I was sure, Ron, you agreed with Gene that I did it wrong when I did that the first day.
	CMP	You did. (Laughter) I was - I forgot - -
	CDR	He did it wrong the first day -
	CMP	Yes ...
	LMP	- - Did it wrong, now.
	CMP	No - -

[redacted]

LMP All I did was that. All I did was go COMMAND RESET and you guys ... - -

CDR But you were in LOW BIT RATE.

CMP You were - you were in LOW BIT RATE.

CDR LOW BIT RATE though.

CMP Yes, yes.

CDR COMMAND RESET ...

LMP No, it was a different - different time - ... time in orbit. Yes, I blew it one time and ... That was before the burn. Yes, but I'm talking about a different time.

CDR I think you're right now. I think in orbit, they do it and you just verify tape motion.

CMP Yes.

LMP Well, I blew that bird thing, yes. I'll agree to that.

CMP Otherwise, how you don't know, see.

CDR Course he's been doing it for 3 days - -

08 16 01 25 CMP Yes, I've been doing it for 3 days like that. (Cleared throat) Where you get screwed up doing something like that is if they've got - if you - ... something different than the - -

CDR Yes, it would.

CMP - - what they want there. But I don't - they'd let me know if they - -

SC Do you have any ...?

CMP Yes.

LMP I don't know where you get that Earth thing. Well, let's see. They say we have no target opportunity except on RR, so I - -

[redacted]

	CDR	Okay, we're going to start pitching here at 42:19 - we start pitching - -
	LMP	- - RR ... is the terminator.
	CDR	- - 0.3, 0.4 of a degree per second.
	LMP	What do you want?
	CMP	No, that's okay. It's all set. CMC, AUTO?
	LMP	Yes.
	CMP	Okay. Start pitching at 42:19. Down at the (cough).
	CDR	So the next thing we have to do is ...
	CMP	Yes, ... Okay; 12 minutes.
	CDR	I'll set if for 10. When you hear the ding, ... something we're supposed to do. And I'll put that other mag on there. I thought this was going to be relay now that we're out of comm.
	CMP	Rolling?
	CMP	I don't know. I was just going to - supposed to - probably roll. How's that sound to you?
08 16 03 02	CDR	Okay, Oscar Oscar's ready. You set the ... and - -
	CMP	Okay, that's right, that's roll. Okay. That's right, we roll about that axis.
	SC	(Cough)
	LMP	This is better than Apollo 8's picture. There's more structure here.
	CMP	You got this one here? Already got it?
	LMP	I got - something. I got a good Earth snap - -
	CMP	That's what I thought. I thought you got an earthrise.

[redacted]

	LMP	No. No. I've never seen that one before - -
	CMP	Took one the other day.
	LMP	- - first one I ever saw.
	CMP	Because I could have took - taken it.
08 16 03 50	LMP	Yes, earth set, is that a space first?
	CMP	(Cough) Yes.
	LMP	... I don't know. It may not have been yet (laughter).
	CDR	Well, I took some - I put my camera on Jack ... station 2. That was upside down - down between my knees. And I held it next to the Rover and I tried to shoot, up the ... and up the ... see if I can see Earth ... I don't know what I was pointing at.
	LMP	Did you take one or - -
	CDR	Oh, I took about five or six.
	LMP	Did you go - -
	CDR	Yes, yes.
	LMP	... probably good.
08 16 04 44	CMP	CMP don biomed harness; I guess I'd better do that.
	SC	...
	CDR	I still see you got to verify the LUNAR SOUNDER, STANDBY, huh?
	CMP	Yes, I got a clock going on that.
	CDR	"Note: All crewmen sketch sunrise and sunset solar corona before TEI." Well, let me tell you about sketching a sunrise. Watch it.
	CMP	(Laughter)

[redacted]

	CDR	Yes. You know, you can look at it like a sunset - up until 1 mom - 1 second, you don't get any warning and you're blinded.
	CMP	Yes, you get warning - you get warning around here. Not much, just - -
	CDR	Just - it's just coming ... don't look.
	CMP	Now, what did I do with my spoon?
	SC	...
	CMP	I thought we learned how to open these - open them with your teeth.
	SC	... end.
	CMP	Yes.
	CMP	Something's wrong. I haven't defecated in 2 days.
	LMP	What rev ... are we coming up on?
	CMP	63.
	CDR	... your rev ... How are these numbered, Ron?
	CMP	There are three of them. The beginning one and - -
	CDR	- - 57, 66, and 75, I ... Okay.
08 16 06 58	CMP	The photo targets are P - something or other - You know, P72. I think it's the 72nd rev - -
	CDR	How are terminators located ..., or are they?
	CMP	Yes. There's a red line by the rev numbers. (Cough) And then if there's a photo target, it's drawn in with a blue line.
	CDR	How do you determine ...?
08 16 07 30	CMP	Well, right here. There's some kind of a terminator. Here's one right here, see ... revs 40, 60, 72, maybe.

[redacted]

CDR Oh, okay.

SC ... right in the eye.

CDR ... you're not gaining ...

CMP Huh?

LMP ... a lot of work and a lot of nonsense.

SC About right.

LMP (Laughter) ... you, Ron ...

CMP (Laughter)

CMP Oh-ho, shoot. You guys been a lot of good help. Lot of good help. Between the three of us, we'll finish up this day.

CDR Yes, I'm not really sorry we took your ...

CMP No, I'm sort of glad you guys did that, really.

LMP I didn't like that last ...

CMP I don't like that last midcourse. I tell you, I had a little - a little ... - -

LMP ... simulator used to do that?

CMP Yes, you know a couple of three times in the simulator, we'd come up there - You guys wouldn't have anything on the midcourse 2. Then I'd come up and have 4 or 5 feet per second in Z. Well, let's see I guess I'll - -

LMP Probably subgeometric. Exploration.

CMP Man, it seems like I just took these things off.

CDR ... good comm ... ranging.

[redacted]

	CMP	Yes, ranging was good. I - It locked on the first time. And then I lost lock again, while you guys were tweaking for something. Did you lose ...
	CDR	We tweaked - we did make a tweak.
	CMP	Yes, but - -
	CDR	About 2 minutes after insertion there.
08 16 10 32	CMP	Yes, I know, but I locked on - locked on just at insertion. After you guys were waiting for a tweak.
	CDR	Yes, we tweaked and then maneuvered.
	CMP	Are we wearing all five of these things, or just three, still?
	CDR	... were you wearing three in here while we were gone?
	CMP	... three.
	CDR	Those are the ones that bother me anyway.
	CMP	Yes.
	CDR	... put it back on.
	CMP	You know, I finally said, heck, those guys on the surface - they didn't even take a thing with them. You know - And (laughter) finally reloaded it and - -
	CDR	... somebody. Jack?
	SC	Oh, boy (laughter).
	CDR	Throw it away; I can't eat it.
08 16 11 24	CDR	Hey, LUNAR SOUNDER, OPERATE, STANDBY; verify right now.
	SC	...
	CDR	Okay, verify to STANDBY.

[redacted]

LMP Lunar sounder - -

CDR Verify STANDBY.

LMP STANDBY.

CDR RECORDER ON?

LMP RECORDER's ON.

CDR RADAR ON?

LMP RADAR's ON.

CDR RECORDER OFF?

LMP RECORDER's OFF.

CDR MODE HF?

LMP MODE is HF; verified. Now what?

CDR Oh, the OPERATE?

CMP No. RECEIVE ONLY, isn't it? Oh, I know. Okay.

CDR LUNAR SOUNDER, OPERATE to STANDBY. You verified that.

LMP Yes, yes. I thought you said OPERATE ...

CDR I said LUNAR SOUNDER, OPERATE - -

LMP Okay. ON, ON, OFF, and HF. Yes, I got that.

CDR And verify STANDBY.

LMP Yes.

CMP It's RECEIVE ONLY.

LMP Stupid clock!

CMP It ding - dinged a little bit late, huh?

[redacted]

LMP Yes. Oh, ... I had had 12 minutes, and I set it for 10 and it didn't ding until 13.

CMP Okay. These darn things - I wish they would put them in ones, or something or other. About two more changes, and we're going to run out.

SC ...

CMP Yes.

CDR ... if we'd have changed as much as we were supposed to - -

LMP ... night ...

CDR - - we probably wouldn't have made it ... command module.

CMP I go back here?

LMP I can wear them for 2 days, and on the thrid day they really begin to bother me.

CMP Yes, the second day they bother me. They start itching on the second day. And when they start itching, then it starts make - eating a little hole down there. Well, I just - -

CDR I tell you, being able to take them off is great. You know, on 10 we wore them for 8 straight days.

CMP Yes. Why don't you snap that over here ...

08 16 14 05 CDR You know, the ones like that we had in the LM are so thin, I had to use two of them, Jack. I don't know whether you did or not, but those little ones. I never changed ... you did change, though? I had to use two ... three little tiny sensors ...

CDR Ron, the first time we depressurize the LM, I didn't have ... comm ...

CMP Yes.

[redacted]

	CDR	... we opened the hatch ...
	CMP	(Laughter)
	CDR	Yes, there was an explosion back there - -
	LMP	Explosion back there, ... came out and all that - -
	CDR	Yes, it was really funny. I'm sure that I used the wrong word over the comm loop. I'm sure the ground - I said, "Gee, we had an explosion." (Laughter) You know, - in a conversational tone of voice. (Laughter) I'm sure the ground went right through the overhead. (Laughter)
	CMP	... like that?
	LMP	Where did you get that?
	CMP	It was off my LCG - I cut all the stuff off of it. Especially the name and the patch.
	CDR	Oh, you jettisoned it?
08 16 15 11	CMP	Yes. I got another one down here, see. Only got one more.
	CMP	Yes.
	CDR	... bother to try to take one of our suits because ...
	SC	(Whistling) (Humming) (Whistling) (Humming)
	CDR	Well, we got P20 - -
	LMP	Sunrise sketch.
	CDR	Right about now, Ron ... we do the P20 now.
	CMP	Re - recall P20. Where - where is the thing? P20, option 5 at - 57, okay. Yes. NOUN 22, that's 5. Right. Plus 40 ... 5, 6, 7, 8. ... Should be all right. Yes. Yes, I got to get a 50 18 ... And we might be able to stay ... Okay, we're within 10 degrees then, ... attitudes, okay.

[redacted]

Yes, that's where - that's where you sketch your sunrise, Gene. In the - in the checklist, page - those pages. Sketch your zodiacal light and stuff. Mercer's and those guys. You know, the reason it ended up in there was because - yes, they were always asking them to sketch the sunrise after they came back, and Mattingly went, "Gosh darn," - you know, let's don't - I mean, "Don't ask me to sketch it now after it's been 2 weeks after I've seen it. If you guys want to discuss it, put it in the book so I'll sketch it when I'm up there." So they did (laughter).

08 16 19 08 LMP ... that's just for getting ready, I think, isn't it?

SC ... know.

LMP ... sunrise.

CMP Yes, that's it exactly - all that note's in there for now, is sometime between now and TEI.

CDR Yes I know.

CMP Okay.

CDR VERB 83 ...

CMP Yes, it will. Yes, you can - you can - go ahead go on in - I don't have anything going now. Yes, you can do it. It just takes a long time. And screws it up a little bit. Because it's got to calculate the state vectors and bring it up ...

CDR ... VERB 58 yet.

CMP No, just roll on there.

CDR Not yet. You still got P20 ... No, on 83.

CMP Yes, you're done. Supposed to be. Should be the same - should be the same as your NOUN 22. You have VERB 62 enabled over there? VERB 62 ... where it wants to go. And so long as it keeps changing, we're in good shape. (Humming)

[redacted]

	SC	...
	CMP	No, it's GO.
	SC	... Okay.
08 16 22 09	LMP	Okay, now, UV is - UV is CLOSED.
	CDR	Okay.
	LMP	It's gray.
	CDR	... STANDBY.
08 16 25 25	LMP	Stop. And - -

TIME SKIP

08 16 39 41	LMP	Okay. That's done.
	CDR	Okay, Jack, ... 22, you want OMNI Bravo.
08 16 39 50	LMP	Okay, we got it. Anything else coming up?
	CDR	...
	LMP	Is Ron up?
	CMP	Yes, I'm up.
	CMP	Okay, we want to do a P20. Let's see, we can be into P20 now. What time is it, 20? I'll get it set up here.
	CDR	Why number all those things ...
	CMP	Yes.
	CDR	... things about the space program. The smell of the oxygen when you put on the - on the - -
	CMP	Suits.
	CDR	- - not the suits, but the carriers, the portable - -

[redacted]

	CMP	Oh, yes.
	CDR	Ventilators.
	CMP	Ventilators.
	CDR	... after you've been in orbit for a few days.
	CMP	Yes, you wanted it. Spit your gum out - just like I did ... get you.
	CMP	270.
	CDR	I have AOS, Houston.
	CMP	39 pretty quick here. OMNI Bravo.
	LMP	... big crater?
	CMP	It's probably Pasteur or Hilbert. Hilbert is the first one. Hee-bahr [sic], is that what it is?
08 16 42 51	CMP	Okay, Houston; America here. Hi, Gordo. Good morning. Or afternoon, I guess it is, isn't it?
	CDR	... got the option?
08 16 43 29	CMP	Well, we want to PRO on that at 26.

TIME SKIP

08 18 23 22	SC	That it?
	LMP	What would be in a higher orbit than we are to be in the Sun?
	CMP	Higher orbit? Up-link.
	LMP	..., yes. Okay; operate it when I look out the window. Well, it's been there for 3 minutes.
	CMP	Where?
	LMP	Right here.

[redacted]

	CDR	Sure it's not a particle.
	CMP	... you got to do.
	LMP	To be in the Sun, it's got to be in higher orbit. Right under. Yes.
	SC	...
	LMP	Are we in sunrise?
	CDR	I don't see any Tsiolkovsky out this window yet, Ron. You haven't hit the terminator, but we are in sunrise.
	LMP	All I see is stars. I think you may have the ...
08 18 25 00	CDR	Jack, you want to trigger your timer there for 213:20, about 213, a little before 213. And it's 05 now; 14-1/2 minutes will do.
	CDR	Let me get to that middle window, Ron, if you're going to be at 5.
	LMP	I had - I had the whole thing upside down.
	CMP	You are. (Laughter)
	LMP	I had the whole thing. I had a concave horizon. I had every - everything ... black here and black there, and then - and - -
	CMP	Oh, I see. Yes. Yes (laughter).
	LMP	I had the whole thing ..., but I couldn't figure out which way we were moving. I mean, that's pretty confusing.
	CMP	Well, let's see.
08 18 27 42	CDR	... set that timer for Jack for the LUNAR SOUNDER, OPERATE.
	LMP	Okay. Trying to hit Pasteur ... have another one ...

[redacted]

	CDR	... have a nadir ... northeast nadir.
	LMP	Yes. Three is going to end up nadir before long.
	CDR	Jack, ...
	LMP	Should have. Maybe. Well, Ron or I probably have it.
	SC	... camera.
	CMP	You got the camera?
	LMP	Yes, it's right here.
	CMP	Okay.
	CMP	You guys both using binocs?
	CDR	I am right now.
	CMP	Okay; no sweat.
	LMP	Which do you want, Ron?
	CMP	I'll use the binocs.
	LMP	I haven't even tried those binoculars yet ... Do you think they're better than the binocs?
	CMP	Well, they are for me. I've noticed a couple of times one of them fogs up, and then I've got the other one available to use. (Laughter)
	LMP	Yes, there you go.
	CMP	... awful big particle ... Look ... When I get in the sunlight, I can see it.
08 18 31 22	CMP	Oh, there ... Think you can hear ...?
	LMP	Let's see. When we - well, I have - I have ...
	CDR	Well, you're looking almost due north, I think, and I'm looking due west.

[redacted]

CMP No, due east, huh? I'm really south - southeast.

CDR ... going to come up in the southeast. You might have it, Ron.

CMP I'm looking directly east.

LMP Okay; we're moving about like this ... let's see.

CDR There's that big crater; it just came up across there.

CMP Pavlov, I guess ... something like that.

CDR Yes.

CMP Pavlov, ... or something. Right on the terminator this time.

LMP Yes, right off Tsiolkovsky now.

CDR Where?

LMP Well, there's the flow.

CDR Yes, it is. Right there. Okay.

CMP Okay; we're in HIGH BIT RATE, I hope.

LMP Yes.

CMP That floor over in the northeast corner - looks like it's in a shadow, the part that goes down the hill. Okay. But before you look - looked at that part of it there just right in the shadow on the thing, it looks to me like a piece of a - the flow or whatever it was that sculptured away or is deposited on the top of the rim of the Crater Tsiolkovsky - a piece of it is slid right down the hill down there. Like a whole chunk of it. So you got a - in the shadow, and I took a picture of it the other day. The shadow that closest to the Crater Tsiolkovsky is the terminus of a - of essentially a piece of the landslide that slid on down there. That's what it looks like. And then

[redacted]

the other part of the shadow, as we see it now, to the northeast, is the part that broke loose and slid down in that little - little crack on the thing.

08 18 34 40 LMP Yes, you're right.

CMP And - -

LMP It's a possibility, though, that this was magma after the impact.

CMP Yes. It's a possibility it was magma. It's - it's some kind of a fluidized-type material.

LMP Right.

CMP But I think it slid on down there ... If you look at the central peak of the - the crater on the western rim, you see no indications of a lava mark at all, high lava mark. On the what - north - No, it's on the south rim, I mean. On the western edge of it, on the north side of the central peak, it's either a talus accumulation that's come down there, or possibly a high lava mark. And I think it's - I would be more prone to call it a talus - talus mark. It's a lighter - lighter-type material. However, that's the same type of a mark that's on some of the other - almost like the sculpture within the landing site.

LMP ... Ron, it's too uniform to be talus, if that's the one ...

08 18 35 56 CMP Yes, it's too uniform. I think it - it may have to be the high lava mark. When you - Let's take a look at Waterman back down there. I can't see that much of it from this angle. But the general texture of the material that's in Waterman generally has flow lines going to the south. The flow - flow spots tend to be arcuate from kind of a depression or a crack that runs from Waterman to Tsiolkovsky. Okay, and that particular depression or crack is in a shadow right now, so I can't see that much of it. When you look at the flow front of the facing

[redacted]

part of the flow to the west of Tsiolkovsky - I think Al Worden has called it a landslide - there doesn't seem to be any piling up of the material along the front itself. It just comes out to a flat area and then drops off at maybe a 45-degree, rolling 45-degree angle.

08 18 37 25 CMP In the - what I'll call the landslide flow - I'm not really convinced it's a landslide, although it very well may be - there are several rimless craters. They are small craters - approximately, oh, in the 50 to - I mean in the 500- to 1000-meter size, there's a slight - On some of them, there's a slight hint of a raised rim. Just a very, very small raised rim. As I look around, I've got the binocs this time. I think they've all got a raised rim. I don't see any without a raised rim now.

LMP Are they circular, Ron?

CMP Yes, they're all circular. They're all circular, but I sure don't see any without raised rims now. I thought I saw something here awhile ago, but I got the - on some other ridge. But I look at it with binoculars, and everything I look at, even though it looks like ... of a rim at all. On some of the pictures, there's just a slight raised rim to it. They seem to be - The raised rim is not - is either highly subdued or either eroded impact crater. When you look down inside them, it looks like they all went down to kind of a point.

08 18 39 36 CDR That'll be LUNAR SOUNDER to OPERATE at 20:10.

LMP Okay ... Ron, can you see ...?

CMP Tsiolkovsky way back over there. No, I'm looking the wrong way. This has got to be to the west. I can't see west.

08 18 40 14 LMP Okay; OPERATE now on LUNAR SOUNDER. What's next, Gene? Got anything else?

CDR Okay; OMNI Bravo.

[redacted]

LMP Okay; verified OMNI Bravo.

CDR Okay, Jack. In 4 minutes, we'll be operating the camera.

LMP Four minutes ... I'm looking west - or east.

CMP Yes, I'm looking south - southwest at - It's going to be right behind you. Right down the X-axis (laughter). No, Y-axis.

LMP We'll get it. It's in our mind's eye, anyway, and that's the most important thing.

CMP This axis thing has always got me a little bit confused. Is the flight towards the small or 50-kilometer crater, 30- to 50-kilometer craters.

LMP ... I been - I been ... And the only thing, when you look at the very fresh - Are you talking about the cone-shaped crater except ...

CMP Yes, cone shaped.

LMP You look at the freshest ones where the black surfaces are, and the black seems to be roughly continuous or at least contiguous with the flat floor. And the floor looks fresher, the fresher the crater looks.

CMP Yes, that's right.

LMP And my guess is that the black is impact glass that's with irregular distribution. Well, I'll have to find one. But like Stark Crater, for example. Stark Crater, for example. You got to get the very fresh ones for them to be black.

CMP Yes, they're - they're very fresh ones, though. They - they don't seem to have as much ...

08 18 42 06 LMP And - and they - that floor in the very fresh ones has - is generally rough. It's smooth, in general, but it has swirl texture and - and domes in it - in them.

[redacted]

	CMP	Yes.
08 18 42 10	LMP	And although it's a different color, it's a lighter color than black glass, the black seems to - to merge with the boundary of it. And my guess is that it's the impact indurated glass that's pooled at the bottom and started a flat floor, then later on, slumping and other things have ... that. ... coming around.

TIME SKIP

08 19 55 56	LMP	This is going to be a 40-degree north oblique photo attitude.
	CMP	That'll be good ..., the oblique will put you right down there.
	CDR	That makes me feel good to make those guys happy.
	LMP	Yes, I think they all are.
	CDR	Yes. I often thought, I'm sure glad ...
	CMP	Yes. That's not oblique. That's cross-X ... Okay. That's 40 - that's 40 degrees.
	CDR	SIM bay and PCM data will not be recorded until 216:35. Ron, why don't you start the P20, and I'm proceeding on 79.
08 19 57 16	CMP	70. NOUN 70. Yes. Or is that - we stay in this attitude for a while? What are you doing?
	CDR	... don't ...
	LMP	Well, what difference does it make?
	CDR	It doesn't make any difference.
	CMP	It ain't working.
	CDR	It doesn't make any difference. Yes, we're in RECEIVE ONLY on the VHF.

[redacted]

08 19 57 44	CMP	Oh, okay. Yes. Yes, we proceed on to that, and then you get a 50 18.
	CDR	Okay.
	CMP	That puts the SIM bay up north. That should be 180 - 180 roll, I think. Yes.
	LMP	Plus-X. Plus-X forward.
	CMP	That should put the center window right straight down.
	LMP	Well, that's bad ... work ... straight down.
08 19 58 44	CDR	Oh, that the orb rate.

# # #

[redacted]

(This page Unclassified)

Tape 17-03434

APOLLO 17 MISSION
APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 66

Time Segments (AET)

From	To
08 21 56 31	08 21 58 33
08 22 02 30	08 22 39 09

Time good, voice very poor (loud background noise)

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

08 21 56 31	CDR	Okay, MANUAL, WIDE, minus 10, and 25.
	LMP	Okay; minus 10 and 25. What else?
	CDR	Nothing until MSFN again. Leave it in MANUAL.
	LMP	Yes.
	CDR	And for acquisition, you want to go MANUAL and then WIDE. And S-band ... and a half ... on HIGH GAIN REACQ and NARROW. I'm going to ask a dumb question, Ron. Why are they changing the configuration of the high gain every - the end of every pass?
	CMP	...
	CDR	Okay.
	LMP	...
	CDR	A couple of ... always here yet.
	LMP	... yet?
	CDR	Then we'll go back to REACQ.
	SC	...
08 21 58 33	CDR	Hey, Ron. With you on the BIOMED, you can sleep up here tomorrow and that would put you downstairs with no BIOMED or no nothing. And you can get a good rest for the EVA, and I'll sleep up here.

TIME SKIP

08 22 02 30	SC	...
	SC	...
08 22 02 40	LMP	Anyone want anything out of the med kit?
	CDR	No, thank you.

[redacted]

	CDR	Where is that pad, Ron? Is that here somewhere? Ron? - oh, it's not in here? That ... Huh? Yes, this it? Yes.
	LMP	Where would I go about looking for it?
	CDR	Bacterial creme.
	LMP	Okay.
	CDR	I want some eye drops. You got any eye drops in here? What's the difference in all those things? - I just want - Here's skin cream. First aid - what did you say? What the heck can I hold my eye up - ... eye drop into it?
	LMP	I did the same thing.
	SC	... go.
	CDR	Ron, ... every time. Please go or something. One-sixth g, at least you know where it's going to be, eventually.
	SC	...
08 22 06 21	CDR	Ron, oh, you bet you we will.
	SC	...
08 22 08 20	CDR	I'm not sure, near side or far side?
	SC	...
	CDR	Back side? I wrote some write ins, I think. Is that what I wrote them in, Ron? On that one?
	CMP	...
	CDR	No, no. On the near side and far side. Is that where I wrote them in? I don't remember. Okay. Maybe it's somewhere else. Or maybe we went by that some place earlier.
	CDR	Yes, where are these pads supposed to be?

[redacted]

SC ...

LMP We don't need a helmet ... Yes, we do. Forgot we have the EVA.

CDR Why do we keep forgetting about that EVA? I don't understand.

CDR I hope that PLSS doesn't ... OPS. No, that was ...

SC ... should be cabin pressure -

CDR ... You could do EVA without it.

CMP That's very good, but look at it; it's filled with helium.

CDR Sure was hard to keep the right setting on the surface of the Moon.

LMP I didn't have any trouble doing it. I thought I went right in - I don't think I ... pan camera ... I never - I forgot almost every pan I took to take the one looking ... at the shadow.

CDR Is that right? I got all of those, but I - I kept hitting the darn thing and I ... - -

LMP Yes, I kept hitting it, so I kept looking at it all the time.

CDR I looked at it, too, but I still ...

SC ...

CDR Nowhere - never - nowhere to look up in the helmet.

SC ...

08 22 13 10 LMP Think I won another one of my bets if that heat flow data that I heard about.

CDR You what?

LMP Won another one of my bets. It sounds like it's going to be less than a 16, at best. They are

[redacted]

		only to 16 degrees - 16 degrees at - 2-1/2 meters? Gradient floor. Think that's ...
	SC	... I - 8 hours.
	SC	Yes, about 8-1/2 hours ...
08 22 17 49	CDR	Pretty good.
	SC	...
	SC	Is that right?
	CDR	... I kind of like here. The bio ...
	CDR	... I don't know.
	SC	...
	CDR	After your EVA ...
08 22 25 17	CDR	Okay. Tomorrow we get up and we do PDI, then we go to bed. Okay. We get up and do a MCC-5 before EVA. Okay. ... Then we go to bed, and we get up and we've got a whole other day. In fact, we do EVA, then we got a day, whole other day to go to bed. Then the next day we get up. See, we get up at 298 and splash down 6-1/2 hours later. All this day is - all this day is get up and we want to be all - This day, this second day, before we go to sleep, we want all our - all our stowage complete - all our stowage complete so that when we get up here, all we do is do ... where it's definitely required and - and ... That's all we want to do. Got to have all our stowage. So after you EVA today - after your EVA today, we'll go through - through all - right here.
	SC	...
	CDR	See, we've got a press conference that day, too. Day after EVA.
	SC	... heart beat.
	SC	...

[redacted]

	SC	...
	SC	Yes, ...
08 22 33 36	SC	... point out that way?
	CDR	Yes, you ought to have it this time.
	CDR	Yes, it's pointing right up at the top ...
08 22 37 02	CDR	I can take it. First - don't - don't pull. No, pull them ... they pull them quick on the Earth ... maybe ... Okay.
	SC	Yes. ...
	CDR	... getting ready. How about now? About 18, you got about 20 seconds.
	SC	... that ... , huh?
	SC	Here comes. Got it?
	SC	Got it.
	CDR	Get that one. Get that one ...
08 22 39 09	SC	Oh, that ...

# # #

[redacted]

(This page Unclassified)

Tape 17-03435

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 67

Time Segments (AET)

From	To
08 23 52 19	09 00 36 44

Audio very, very poor; time good.

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[redacted]

08 23 52 19	SC	It just depends on what ... you don't have to put that all the way up ... on the top.
	CDR	Put this thing in between there.
	SC	... about like that. ... on top.
	SC	...
	SC	Don't cut your head short.
	LMP	Yes, I'm wearing this, but it just stays here in between the buttons real free.
	CMP	Yes. See, it stays between those buttons.
	LMP	There they go.
	CDR	Okay, Jack. Verify no DSE tape motion.
	LMP	No? Verify no DSE tape. Well, there is tape motion. Now what am I supposed to do?
	CDR	Well, that was just above the line, where it says no - it looks like - I can't - Configure DSE, HIGH BIT RATE/RECORD/FORWARD/COMMAND RESET.
	LMP	Does it make any difference, huh?
	LMP	I can't stop it. COMMAND RESET.
	CDR	Okay. It's HIGH BIT RATE - -
	LMP	HIGH BIT RATE.
	CDR	RECORD/FORWARD
08 23 54 38	LMP	COMMAND RESET. Okay? All done. Happy with COMMAND RESET. I'll do it again. Okay?
	CDR	Okay. HIGH GAIN, plus 25. (Music)
	LMP	What again?
	CDR	Pitch is 25 and yaw is 195. We'll have a maneuver here shortly. NAR - REACQ - REACQ and NARROW, REACQ and NARROW on it.

[redacted]

	LMP	Okay. You want to do that? Before or after?
	CDR	Now.
	LMP	Now.
	CDR	... go to REACQ.
	CMP	Well, we wanted REACQ, NARROW, REACQ and NARROW, all right? Okay.
	LMP	Okay. O_2 FUEL CELL PURGE. WASTE WATER DUMP. CMC MODE - FREE. Manually roll left 40 degrees, huh?
	CDR	Okay. I'll manually roll up 40. Why don't I get - put it in - it's all COMMAND.
	LMP	Okay. You're - fuel cell 1, purge O_2.
	CMP	... 11 minutes.
	LMP	Okay. And now it's 36, so that - 47.
	CDR	Going from 138 at about 98 degrees. Yes, but we'll be minus that. Did you dump the waste water?
	CMP	Yes.
	CMP	Waste water feeding up.
08 23 59 46	CMP	Better go up in the tunnel again.
	LMP	Another tape.
	CMP	Another tape?
	LMP	Yes, they're in the tunnel.
	CMP	(Singing) They're good. (Whistling)
	LMP	Okay. Master flow is up just above the limit. Yes, - just above the limit.
	CMP	Boy, I can barely use it.

[redacted]

	LMP	Did you get one out? Barely tripped it ... I didn't hear it at all.
	CDR	I did.
	CDR	Ron, you're down to 40 on the waste water.
	CMP	Forty? Okay.
	CDR	Jack, sunrise is at 218:50. 28 - excuse me - 58, 58, 58.
	CDR	We have got another hour in which to eat.
	CMP	Are we eating now?
	CDR	Another 15 minutes.
	LMP	Shoot! I can't eat again. Maybe nibble a little bit, ...
09 00 04 24	LMP	Takes me about the time between meals to get all the gas from my system, and then I eat again.
	CDR	My gas - my gas (laughter) is still - my gas is still acting up, Jack.
	LMP	It gradually works its way out about this time, and then it's time to eat again. Heck, I don't even need to have it on the Flight Plan. I know when it's time to eat when I start feeling good.
	CMP	(Laughter)
	CDR	I don't know whether you'll be able to see sunrise at this attitude or not, Jack. We're going minus-X, so I'd say you will not.
	LMP	The fact that I - yes, we're maneuvering again. Unless we don't get there before sunrise.
09 00 06 21	CMP	Take your final bearings ...?
	LMP	Not since early this morning. 37. Right. ... Battery C's right up there, too. B's up there, A's down. Probably charge A tomorrow.

[redacted]

	CDR	What did you do with those cards I tore out the other day - they're lost someplace.
	LMP	I'll get them. Okay. I want to save one of those.
	CDR	Did we get a reference soil at Shorty?
	LMP	Yes, yes. Did I get away from the payload? Something's going - -
	CDR	I know we were thinking of it. I got the top. A little, yes; you got around a centimeter, all right, but - Did we go away from it - get a reference on it?
09 00 07 11	LMP	I hope we did. I can't remember doing it.
	CDR	No, but I got a ...
	LMP	... right in the same ...
	LMP	I dug that trench right in the - right at the edge of the orange stuff.
	CDR	All those distances with the core ... Oh, well. Close enough.
	SC	...
	CDR	Huh?
	SC	...
	CDR	What are you trying to do?
	CMP	Use one hand ...
	CDR	Huh?
09 00 09 13	LMP	You're backwards.
	CMP	That's what ... backwards ... I'm normal.
	LMP	What are you mumbling about?
	CMP	Well, I was saying that - like you're sitting in sideways ... that way

[redacted]

	LMP	You got to - -
	CMP	Twist it the other way.
	CDR	You say you're in the short state now with my maneuver? 0.1 degree per second in REACQ.
	CDR	That roll was to keep us out of gimbal lock. Otherwise, we'd have gone through it.
	CMP	Wait a minute. ... in FREE - you are FREE.
09 00 10 29	CDR	No, I'm not, I'm AUTO. I'm maneuvering.
	CMP	Oh, you're maneuvering ...
	CDR	I've been maneuvering for 10 ...
	CMP	...
	CDR	I don't think you'll ever figure it out, Ron.
	CMP	... buddy, I'm right behind you.
	CDR	Oh, we're going. That's the end.
	CMP	We're going toward the Sun - -
	CDR	Yes.
	CMP	And, we're about ROLL zero.
	CDR	Well, we are now.
	CMP	Okay, we're ROLL zero.
	CMP	That means my ... points backwards. Where we came from.
	CDR	Yes.
	CMP	I can't see the sunrise without ...
	CDR	No, because you're pointing up in the air.
	CMP	No, not too much, really.

[redacted]

09 00 12 25	CDR	Oh, you can look down over the edge, I guess - You can look at the horizon, can't you?
	CMP	You'll be able to look at the horizon because, see - you roll - roll left at 3 degrees - ...
	SC	Take a picture of Earth, Ron.
	CMP	Yes.
	CDR	Did you ever get that thing running on the rendezvous? Huh?
	SC	Not yet.
09 00 13 35	CMP	Was that rendezvous? No, it wasn't. It was separation, wasn't it?
	SC	No, ...
	CMP	... rushing my experiment.
	SC	...
	CMP	I want to make sure I get the pictures of the ...
	CMP	Heat flow.
	SC	... zero.
	SC	Sure.
	CDR	Thought we had that timer set.
	CMP	No, we're timing purges.
	CDR	Okay, we're dumping.
	CDR	Yes, we dumped - yes, we dumped the potable water, too, Ron.
	CMP	We did?
09 00 15 00	CDR	Yes. We dumped the potable water.
	LMP	I got about 20 percent.
	SC	That's down to a quarter.

[redacted]

	SC	...
	CMP	What's the problem?
	SC	...
	SC	Well, it's - it's ...
	CDR	If you get the potable to zero, then you're in ...
	CDR	Because your - verify it is off.
	LMP	See, your evaporators and everything pull off the weight, don't they?
	SC	...
	LMP	But we're not using them.
	CMP	Not using them.
09 00 15 52	LMP	Oh, me, how embarrassing.
	LMP	Well, it's my fault, I should've got that timer going after the purge.
	CMP	Yes, ...
	LMP	No, you didn't want a perfect mission, did you?
	CMP	(Laughter) What's that ...
	LMP	Got to have some award. The potable water dump award. (Laughter)
	SC	...
	LMP	Wait.
	CMP	... went out of control. ... (Laughter) Okay.
	LMP	What'd you do?
09 00 16 45	CMP	I was dumping water in those - CMC FREE - looked up and - gimbal lock right in front of you?
	LMP	(Laughter)
	CMP	Didn't have any control - looked back and the waste water was down ...
	LMP	Little-known stories.

[redacted]

	CMP	(Laughter)
	LMP	Well, let me see here. No way to get it in there without filling up the - Oh, boy.
	CMP	Yes, but I don't think we need the waste water for anything, do we?
	LMP	No, but that's for the evaporator - Well -
	CMP	Yes, evaporator uses it ...
	LMP	No, but I'm wondering about the bladder and everything.
09 00 17 43	CMP	Yes, so am I. This thing ...
	LMP	That means the bladder expanded to the wall - not collapsed.
	SC	No. ...
	LMP	Well, that line's open. You got that line open for potable - the waste water line's open.
	SC	Yes.
	LMP	It's potable water. And, when it's filled, that's collapsed, and - -
	SC	...
	LMP	Well, yes, it ... I think it back fills somehow.
	LMP	Yes. Yes, when it fills, it comes back this way. Here you go.
09 00 19 19	CMP	It'll come through the - -
	LMP	Here's the cross - -
	SC	- - potable water.
	LMP	- - comes this way. There.
	LMP	See, it won't flow that way, it goes - because of this check valve until it's full, then it'll move.

[redacted]

	CDR	Well, I called you at 40. And then I looked at it again, and it was zero.
	LMP	Yes?
	CMP	I think if I move my camera ...
	CDR	What are we dumping right now?
	CDR	Well, we going to use it for anything else now? We'd like to - We use it after TEI to take the pictures with. So we want it handy.
09 00 20 55	CDR	It's not really necessary ...
	LMP	Is this - you ordered a QD down here, or some kind of connection. Looks like the access - that must be GSE - for servicing the waste tank.
	CMP	Yes, ...
	LMP	Well, I know you dump over here.
	CMP	Right ...
	CDR	Well, something is using the waste water now, is it, Jack? Can you find out ...?
	LMP	No.
	CDR	I have potable coming up.
	CMP	Coming up?
	CDR	Better be.
	CMP	You know, we could really dump that waste tank, too.
	LMP	Checking on primary evaporator.
	CDR	That all?
09 00 22 07	LMP	That's all that's showing here right now.
	CMP	It must be dry now?
	LMP	I could use ...

[redacted]

	CMP	Oh, yes.
	LMP	You're dried off. Now I'm off - -
	SC	Yes. A long time ago.
	CDR	We're in daylight.
	LMP	Well, give the night crew something to think about. Hope it's nothing - nothing serious. Yes, it could be -
	SC	Wow!
09 00 25 23	LMP	What's next, Geno?
	CDR	Eat, eat, eat, eat, eat -
	LMP	That's taken care of, now what? (Laughter) Maybe I'll eat my peach ambrosia. It's been hanging around all day.
	SC	...
	LMP	Well, we're in sunlight right now. We haven't crossed the terminator yet.
	SC	...
	LMP	Yes. You limit your field of view.
	CDR	Find that other one?
	LMP	No. No, I haven't.
	LMP	What's that?
09 00 27 49	LMP	Oh, I think you already ...
09 00 33 07	CDR	Jack, you got the ... binoculars?
	LMP	Binoculars?
	CDR	Well, whatever you're not using.
	LMP	No, never had any idea we'd use them.

[redacted]

CDR Well, you know -

LMP Go - go ahead, I thought - I -

LMP Let's have our lunch, Gene. Frankfurter?

CDR Boy, it's awful early.

LMP Bread?

CDR One piece.

LMP Catsup?

CDR Yes.

LMP Apricot?

CDR No.

LMP Orange drink?

CDR Yeeeuch!

LMP Anything else?

CDR No.

LMP We're not asking what you'd be - what you had.

CMP You got turkey and gravy inside? You want these potatoes? Brownies? Orange juice and lemonade.

LMP Well, I probably have lemon filling. Come on, come on. Save that ...

CMP I'll have lemonade ...

LMP Corn chowder?

CMP No.

LMP Frankfurter?

CMP Yes.

LMP Bread?

[redacted]

	CMP	One piece.
	LMP	Catsup?
	CMP	No.
	LMP	Chocolate pudding?
	CMP	No.
	LMP	...
	CMP	Yes.
	LMP	Anything else?
09 00 36 35	CDR	I'll have a sugar cookie. And a grape drink in there somewhere. The other one.
	SC	...
09 00 36 44	SC	Had two there.
	SC	And - -

# # #

[redacted]

(This page Unclassified)

Tape 17-03436

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 66

Time Segments (AET)

From	To
09 01 46 35	09 02 20 40

Time good except at beginning of tape; voice fair.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

09 01 46 35	SC	...
09 01 46 45	LMP	Bob, that's the most beautiful crescent Earth I've ever seen.
	LMP	That should give you a lot of ... your rendezvous with him. Whatever's easier ... closer.
	LMP	That bright spot. See it - how bright it is? Right in the center of the crescent? Yes, yes, but it's never been that bright. Usually you just get the zero phase. It's getting so it's glancing off now and giving you a ... It used to be - I guess that's what the term ... reflection.
	LMP	You do well when you look at a planet and call it home, Bob.
	LMP	No, I know. They dropped the uplink there briefly.
	CDR	Yes.
	SC	...
	LMP	I didn't.
	CDR	... quite a bit ... tomorrow.
	LMP	Ain't much to talk about (laughter) on the way home. We have our hands full, though - EVA and stowage.
	CDR	... EVA ... really ...
09 01 49 57	LMP	Oh, we got to do those too, huh? Quite a picture.
	LMP	... you might be able to see the ... Earth - Earth's outline. Yes, in a full Moon ... I wonder how much lightning you can see and how far out. Have you guys ever looked at it, Gene?
	CDR	At what?
	LMP	Lightning. You probably had a - -
	CDR	You can't see - -

[redacted]

	LMP	You probably had a - some crescent, though, all the way back, didn't you?
	CDR	Yes, but a little more than that but not much ...
	LMP	I think we're going to ... just about dark, aren't we, Ron?
	CMP	Yes, ...
09 01 51 55	LMP	*** seem like the curve across it has the right shape.
	CMP	Oh, yes.
	LMP	Yes, it is. Um-hm ... Oh, darn! (Laughter) There's the picture. Oh, gosh. Never even thought about it. Oh, well. Remember it, gang.
	CMP	Yes, remember it. Son-of-a-gun.
	LMP	There's still a glow. Okay. I got -
	CMP	130 ... about 128 ...
	CDR	Okay. We got the read-out ...
09 01 54 48	CMP	Yes. Yes.
09 02 02 03	CDR	Does anybody need anything else in that kit?
09 02 08 05	LMP	No, darn it, I didn't ...
	MS	(Laughter)
	LMP	I don't care ... I know it won't work. That's why you don't put it that way.
	LMP	We can ... can't get the visor ... The more I think about it, ...
	LMP	(Laughter)
09 02 12 14	SC	(Laughter)

[redacted]

	LMP	Well, my beard is looking just as scraggly - straggly as it did yesterday.
	CDR	... the last 2 days.
	LMP	... I thought ... first beard I've had in a decade ...
	CMP	(Laughter)
09 02 16 18	LMP	... Yes.
	LMP	I can't ... (Music)
09 02 20 40	LMP	Well, - (Laughter)

# # #

[redacted]

(This page Unclassified)

Tape 17-03462

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 72

Time Segments (AET)

From	To
09 09 47 10	09 10 34 57

Voice very poor; time good except for ending time, which was extrapolated.

SECURITY CLASSIFICATION

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[redacted]

09 09 47 10	CDR	... 13 days ...
	LMP	Yes.
	SC	(Cough)
	LMP	Don't overdo it. We've got to have some for EVA (laughter).
	CDR	Now, let's see ...
	LMP	Yes. Yes. Yes.
	LMP	Keep the light down in there.
	SC	...
	LMP	Yes.
	CDR	Actually, you ...
	LMP	Yes. Well, that's probably zodiacal light. I find it hard to see it, but I think what I was seeing was little - We didn't have the light ... Well, very good (laughter).
	SC	(Music)
	CMP	...
	LMP	... waking up. We're ... pretty late.
	CMP	First thing I want to do is ... postsleep checklist.
	CMP	Did you say 11? Eleven?
	SC	All right.
	SC	... reading?
	CDR	... reading. He had to take 10 - start out - from noon. We start out from - -
	SC	... clock.

[redacted]

	CDR	No, it's really - Start out literally - 24-hour days from the Cape, we're still, in the tenth day - eleventh spacecraft day.
09 09 50 20	CMP	Eleven crew days.
	CDR	That was pretty cute, you know that?
		(Music: Born Free)
	CMP	No, you're on the wrong ... right now ...
	CMP	That's what it ... when you turned your thing on.
09 09 54 46	CDR	... I turned that ... ... VERB 48.
	CMP	Sure a good idea to have Christmas cake one day.
	SC	What?
	CMP	Sure a good idea ...
	SC	Hi, Ron.
	CMP	You know who that really was.
	SC	...
	SC	(Laughter)
	SC	Hang on ...
	CMP	... said what?
	SC	...
	CMP	Yes, you've got a ... anyway ...
09 10 00 58	LMP	I've got enough left. No, I haven't tasted it. ... that, Jim.
	CDR	... my light.
	CMP	... it?
	CMP	Okay. .... space flight up-link: This thing?
	SC	...

[redacted]

09 10 04 43	CMP	We got some more food, if you want it. ...
	CMP	Oh, let's see, Jack, if you'll give me a pen ...
	CMP	Here, let me have that thing. Okay. ...
	CDR	...
	CMP	...?
	CDR	No, I have that.
	CMP	Brownie, brownie, orange juice, lemonade, and that's all, isn't it?
	CMP	Okay. You know what I did? (Laughter) I went ... sleep. ...
	CMP	... can of peaches ...
	LMP	... turkey and gravy. ... carmel candy. Orange juice.
	SC	No.
	SC	...
	CMP	You're looking for day 11, meal 8.
	SC	...
	CMP	... can of peaches. ...
	SC	... water.
09 10 10 21	CMP	... of 050. You two ... radiation right here ...
	LMP	Not bad, huh?
	SC	...
	SC	... 9.
	CMP	...

[redacted]

09 10 12 26	SC	It does something for me, ... know what.
	CMP	I don't want two of them; I've got one here.
	SC	...
	CMP	Yes.
	SC	...
	CMP	They went ... They went back here. ... all over here. ...
09 10 15 36	LMP	About 68, Geno.
	CDR	That's what I thought.
	LMP	No, thank you.
	SC	... run away ...
	SC	... If I hit ... right down there.
09 10 17 10	LMP	I know; well, I don't. (Laughter) ... home, I got up and read a magazine.
	CDR	... this?
	SC	Yes.
09 10 24 24	CDR	... omni ...
	CMP	Two degrees, right?
	CMP	You guys might watch for those scissors in here.
	CMP	... I guess ... guys ...
	SC	Yes. Yes.
09 10 26 44	CDR	What rev - what rev? You're ... rev 74.
	LMP	Yes, but you ...
	CDR	Yes.

[redacted]

	SC	First, let me ask a question.
	SC	All right.
09 10 28 20	LMP	Yes. That's the ... I was just trying to compare the modulation ...
	SC	Yes, it is ...
		(Music)
09 10 32 24	CDR	We got to the LM with about 60 percent ... ran out of descent water. We left the surface with a little over 80 percent. We did the checkout and the landing and then we had - I think - what was it, Jack, 80 and 81 - somewhere around there. I don't know what the numbers were, but they're approximate.
	CMP	... descent water ...
	SC	...
	CDR	That was three ... and five - five repress - five re - cabin and repress. Three EVAs and two jettisons.
09 10 33 14	CC	America, Houston. Realize you're eating and don't want to interrupt you, but if you get your headsets on, we'll give you some news.
	CMP	Sounds great, Houston. We'd appreciate that.
	CDR	Go ahead, Bob. We're listening to you. You're not coming through. You are?
	SC	1, 2, 3, 4.
	CDR	Oh, yes, you are.
	CC	Okay, ... really important news first. ... Nassau Bay, everybody's doing real fine, ... one of our bigger amusement centers around the country and going to have a great day. And everybody just looking forward to the EVA and the deorbit - -
	SC	Deorbit?

[redacted]

	CC	- - and the splash. Out in El Lago - Everybody's fine out there, Ron. And Joan's out selling Christmas trees today, and Jaime's going to go out shopping with her aunt sometime today and - a little Christmas shopping - It's getting near that time of year. And one of your friends from Phoenix is due in today, for the rest of the mission, I guess. And out in Tucson, it was a little early this morning, Jack, but everybody's up and about and I talked to your mother, and everybody's fine. She's getting anxious to go back to Silver City and see all the celebration. I guess those people out there are really enjoying it and really getting wild about it. But everybody's fine all the way around, all the way around.
	CDR	Thank you, Bob. We're fine up here, and I'm sure you told them that.
	CC	Yes. Okay; we'd like REACQ and NARROW.
09 10 34 57	CDR	Well, we send our good morning.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03465

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 73

Time Segments (AET)

From	To
09 11 43 22	09 11 58 26
09 12 00 21	09 12 13 36
09 12 13 35	09 12 43 24

Voice fair; time good.

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[redacted]

09 11 43 22	LMP	Go ahead. What omni?
	CDR	5.7 plus 18 and HIGH GAIN POWER, OFF.
	LMP	What omni? What omni, Gene?
	LMP	Okay, HIGH GAIN POWER, OFF. What's the setting?
	CDR	Minus 27.
09 11 44 17	LMP	Okay, MANUAL and WIDE.
	CDR	No, Ron's got REACQ and NARROW crossed off. So, it's MANUAL and MANUAL, minus 0.7, 18, and POWER, OFF.
09 11 44 33	CDR	POWER, OFF.
	CDR	Okay. Now that it's OFF, LUNAR SOUNDER, STAND BY, verify?
09 11 44 43	LMP	Verified.
	CDR	RECORDER, ON?
09 11 44 47	LMP	Okay, RECORDER's ON.
09 11 44 54	CDR	That's affirm. We've got MAPPING CAMERA, OFF, Bob. Can you verify that, Jack?
	LMP	Yes, verified.
	CDR	We got them all now. We're coming up.
09 11 45 10	LMP	Okay, RECORDER's ON.
	CDR	Okay, RADAR, ON?
09 11 45 13	LMP	RADAR's ON.
	CDR	RECRODER, OFF.
09 11 45 16	LMP	RECORDER's OFF.
	CDR	MODE, HF.
09 11 45 22	LMP	MODE, HF; verified.

[redacted]

	CDR	What's at 231:11, Bob?
	LMP	LOS [sic].
	CDR	Okay, fine. Thank you.
	LMP	Okay, HF is back.
	CDR	Just wanted to make sure I got all of them. We've got LUNAR SOUNDER OPERATE. LUNAR SOUNDER OPERATE to STANDBY, verify.
	LMP	Verified, verified.
	CDR	RECORDER, ON; RADAR, ON; RECORDER, OFF.
	LMP	...
	CDR	Okay, and MODE, HF.
	LMP	HF.
	CDR	Okay, now verify all your VHF is OFF.
09 11 46 02	LMP	Okay, OFF, OFF, it's OFF, it's OFF. Okay. It's OFF.
	CDR	As soon as we ..., you can turn your ... And we can't wash out our ... No waste water dump.
	CDR	Now, we've got a lot of things here with the lunar sounder on the back side.
	LMP	Ron's out of the LEB. I'm going to go down there, and try to ... operation.
	CDR	All - all equal.
	LMP	Okay. Can I get my biomed off - -
	CDR	Sure.
	LMP	- - before we come back around the corner?
	CDR	And, we've got a dump on this back side, too.

[redacted]

	LMP	Yes, a water - BUSS dump.
	CDR	... get that dump, too, before we come around the horn.
09 11 48 29	CDR	Mainly, we've got to dump this back side.
	CDR	What's ... 230?
09 11 53 50	CDR	Well, I can change ... up on it.
	SC	Huh?
	LMP	...
	CDR	... What?
	CDR	Huh?
	CDR	That's the final - Huh?
09 11 58 26	LMP	... control ...

TIME SKIP

[redacted]

09 12 00 21	CDR	- - and the middle of the backside pass there's stuff we got to do.
	SC	...
	LMP	Here's the -
	CDR	Here's something, Jack.
09 12 02 04	CDR	Okay, you got the - you got the ... 4 and 5, yes.
	CDR	No. I'm not. ...?
09 12 04 10	CDR	Coming up on 4 5 ... No, no. This one is supposed to be the last one.
09 12 05 00	CDR	Going to get the recorder?
09 12 08 02	CDR	See the ground is ...
	SC	...
	SC	...?
	SC	...
09 12 09 52	CDR	The next thing is on the hour when we've got to get the ... operating and the T-start time ...
	SC	...? ... now?
	CDR	Huh?
09 12 10 36	CDR	... on the hour now.

TIME SKIP

[redacted]

09 12 13 35	CDR	... do it on the hour now.
09 12 20 57	CDR	What do you need?
09 12 24 27	CMP	There you go.
09 12 24 32	CMP	Okay, tape recorder frame numbers - oh, about - must be 13 through 16 - no, more than that - about 12 - 11 or 12 through 16 were taken of the Tsiolkovsky area and terminize - terminator sunrise. And the magazine Vic - Victor Victor - -
	SC	...
	CMP	Yes, just past sunrise. And there's a ... one out there. We'll try it.
	CMP	About - Okay, that was frame number 19, I guess. It's just to the west of Tsiolkovsky, just prior to - is that Neujmin?
09 12 26 30	CMP	Would you move this back up? Just get your - I want to get you down ... I won't get you down ... I'm going to move this back over here. Hold this. Yes.
	CMP	Doesn't look like much light ... Oh, just - Oh, yes, lots of them. I'll get a good picture of your beard.
09 12 27 11	CMP	Okay, little up your rear, or something (laughter).
		(Music)
09 12 27 44	CMP	VHBW is on 80, and we got a 115.
	CMP	That's 85.
09 12 27 55	CMP	15.30 (laughter). Yes. We'll do an ad lib with that on the camera and take a - flick or two. Where's the old Hasselblad? ... Let's put this on there and finish it up.
	CDR	... TEI?
	LMP	TEI? No.

[redacted]

	LMP	I mean, TEI prep?
	CDR	No, no. I don't think so.
	CMP	You know, there is a lot of this other stuff in there.
	CDR	... we changed it once already this morning.
	CMP	Yes, but that was just going to minus-X, wasn't it?
	CDR	Yes, that was just swapping ends. Swapping ends.
	CMP	Okay. Plus-X.
	CDR	Hey, T-stop.
	CMP	Yes, when is T-stop?
	CDR	Now.
	CMP	Now?
	CDR	Now.
	CMP	Operate to STANDBY.
	CDR	OPERATE to STAND BY.
	CMP	Okay.
09 12 29 00	CMP	Okay, acquire MSFN and OMNI Alfa. ... where we are?
	CDR	We got a canister to change, and we won't acquire them until 11.
	CDR	Next thing, you'll be going mode VHF about 22.
	CMP	Twenty-two? Okay. Will they - they'll give us a call.
09 12 30 37	CMP	What the heck are we coming up on? You know, Pasteur doesn't show up as much of a crater.
	CMP	Yes, it really is. Yes, I don't even see it out there. But in our direction - let's see here. It's got to be. But it is over there, I think.

[redacted]

09 12 31 33	CMP	Houston, this is America.
09 12 31 39	CC	Hello, America. You're a little scratchy down here. We'll pick you up there shortly.
	CMP	Okay. We'll stand by until then.
	CMP	Okay, that last lunar sounder pass got an extra 40 seconds on the film - 40 seconds on the - on the last end of it.
	CDR	Take the ..., Jack.
09 12 32 44	CMP	... see Sklodowska. There it is, yes.
	CMP	Which - which recorder?
	CMP	... coming up?
09 12 34 13	CMP	Here, let me in here. ... back in. ...
09 12 34 18	CDR	Okay, Houston, this is America.
	CMP	Hit your REACTANTS switch.
	CDR	Okay, Bob. I was over there on the right side, and I hit the FUEL CELL 1 REACTANTS switch about one - half a second and got it back on again. It looked -
	CDR	It looks okay here.
	CMP	Yes, that's ... right over there.
	CDR	No, no. That's way behind me. ... straight ahead.
	CMP	That's the Wright Brothers. They're hooked together?
	CDR	One's big and one's little, and ... to the right of it.
	CMP	Over on the right - left. I don't know. Those don't have names, they're in Smythii. See, Wright Brothers is that double one there.

[redacted]

	SC	You must be talking about ...
	CMP	Oh, Kastner? That's clear on the other side.
	CDR	No, no.
	CMP	There's Brunner and Hirayama, and I'm just about over that now.
	CDR	Where are the Wright Brothers then?
	CMP	The Wright Brothers? They're the two mud puddles that are hooked together down there - just right down this way.
	CDR	They're the big ones. There's another two you can see ...
	CMP	Yes, but none of the big ones look like this. They're rough looking. Yes.
09 12 37 36	CDR	Mode VHF will come at 23 right at ... here.
	CMP	Mode VHF. Yes. I've got it.
	CC	America, Houston. If you're reading us loud and clear, I'd like to give you a lunar sounder flight-sounder pad here at 231:21.
09 12 38 11	CMP	You do it, Gene?
	CDR	Okay, Bob. Go ahead.
	CC	Okay; it's at 231:21, the lunar sounder T-start time, 231:26:18; T-stop, 50:33.
	CDR	Okay, I got that. Thank you. You happy with the biomed on the CDR?
09 12 38 54	CC	We won't know until we get the high gain here at 21.
	CDR	Okay.
		(Music)

[redacted]

09 12 41 03	CMP	Houston, America.
	CC	...
	CMP	Okay. Just looking at the Wright Brothers Crater as we were going through there again. And the outer-crater rims on that thing are kind of like the one - well, I call it above rev 62 on our pictures, but the outer rim - it slopes ... in the opposite direction from the normal crater, or something. In other words, the steep slope is on the outside of the rim, and you have a gradual slope up to the - you know, from the - from the center of the crater, you've got a gradual slope up to the rim, and then it drops off to a steep slope on the outside. And the steep slope on the outside is maybe - oh, 35 to 45 degrees. The slope on the inside is probably - well, somewhere around 20 degrees I would guess. And there at one portion of the rim - kind of on the western portion of one that I was looking at, anyhow - it's almost a delta-shaped ring.
	CC	Roger, Ron. ... high gain ... we can read you better.
	CDR	Okay, minus 27 and 18.
09 12 42 26	CMP	Minus 27, 18. Okay, I got a START.
	CDR	Half-scale. Go to REACQ and NARROW.
	SC	...
	CMP	Your pencil?
	SC	... high gain?
	CMP	Yes.
	CC	... America. You're sounding great now.
	CMP	Okay; looks like we've got you. You know, I think we're too fast for the NARROW, Gene.

[redacted]

CMP Okay. I was just kind of reminiscing a little bit about the - my mud puddle craters there in Smythii. I guess that's a good term to call them - that's what they always kind of looked like to me. But - they slope up.

09 12 43 24 CMP But the rims of those craters and even the interior rim on ones that are multi-ringed, they slope upward from the center of the crater toward the rim at that - at a gradual slope, and then they drop off on the outside of the crater rim, sloping down from the outside crater up to a point - -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03457

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING LUNAR ORBIT 73

Time Segments (AET)

From	To
09 12 43 42	09 12 44 07
09 13 43 11	09 14 30 39

Time and voice good.

SECURITY CLASSIFICATION

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[redacted]

09 12 43 42	CMP	- - the crater rim, sloping down from the outside crater up to 45 degrees. And in some points in there, it almost looks like it's a real classic Delta-shaped rim on there - where you have the same slope on the - on the inside as well as the outside of the crater.
	SC	...
	CDR	Okay, Ron. We want - -
	CMP	VHF - -
09 12 44 07	CDR	Let's see. Houston, you ready?

TIME SKIP

[redacted]

09 13 43 11	LMP	Okay.
	CDR	What are you on in HIGH GAIN now? Are you in AUTO?
	LMP	AUTO, WIDE, probably.
	CDR	Okay.
	LMP	I mean it sits there ...
	CDR	You know you can set your - your needle to minus 10 - or your dial to minus 10 and 0.5. And then, on their call, you can go MANUAL and WIDE.
	LMP	Okay.
	CDR	Okay?
	CMP	Do I have time to work on this jett bag now, Gene?
	CDR	Yes. Jack will monitor that operation. ... talkback ...
	CMP	I'll watch it.
	LMP	It's all we got to do for another 8 minutes.
	CDR	Yes, you've - jett - jett bag - What you ought to do is just put that jett bag around you so you don't have to take the whole handle. Want some help with that?
	LMP	Yes. I will in a minute.
	CDR	Hey, Bob, what about us configuring high gain? We're getting close to T-start.
	CC	Roger. Go ahead.
	CDR	Okay. MANUAL, minus 10 and 25. And the power off.
	LMP	Minus 10 and 25. Okay. Power's off. And that's going to be to OPERATE, right?

[redacted]

	CDR	LUNAR SOUNDER, OPERATE, to OPERATE.
	LMP	Okay.
09 13 45 57	CDR	And after talkback - after it starts running, after talkback goes barber pole, go LUNAR SOUNDER to STANDBY.
	LMP	Okay.
	CDR	You know where that jett bag is, Ron?
	SC	...
	CDR	No, I just stuck it - it's between these two ... - -
	LMP	Give me a MARK.
	CDR	- - down there in the bottom.
09 13 46 14	CDR	MARK.
	CDR	What?
	LMP	... barber pole, gray.
	CDR	See it, Ron. It just stuck against the ... Got it?
	CMP	Okay.
	LMP	Put on a tape while I'm watching (laughter).
	CDR	Okay, Jack. And the T-stop is 34:18. And let me get - get rid of this thing and ... and get a tape on and -
	LMP	34:18, about 5 minutes.
	LMP	... about 8 minutes.
	SC	(Cough)
	CDR	What can I do?
	CDR	Oh, the jett bag?

[redacted]

09 13 47 32	SC	Right.
	LMP	That gets so big, it gets far away from you.
	LMP	That it?
09 13 50 03	CDR	No, why don't you - let's inventory those fecal bags. But leave enough to make sure there's plenty here. Want to put those in here now? Those fecal bags? While you're down there? Get them in here now. Wait a minute. Be real conservative. Make sure there's plenty left.
	SC	...
	CDR	Okay.
	CDR	Yes, I may use one today. And we've got three - three? Okay. Count today. Count - you guys want to defecate again. Okay.
	LMP	Say one a day.
	CDR	Three - three for me.
	LMP	We need nine of them then.
	CDR	And that'll be plenty.
	SC	...
	CDR	Counting today.
09 13 51 16	CDR	Look - Wait - wait a minute. We - we - we land 3 days from right now - 72 hours from right now. So, here's today, EVA day - -
	LMP	Stowage day.
	CDR	- - stowage day. And then we get up, and we land - entry day. I don't know if you want to save one for entry day. There's - You guys have all defecated already.
	CDR	Three of - three's going to be plenty for me. And I may only use one today and one more.

[redacted]

	LMP	Yes, three for me. I got something - bad food or something - -
	CDR	Throw an extra one in. Throw 10 of them in there.
09 13 52 00	LMP	I think they missed that call.
	CDR	What?
	LMP	Barber pole. Remember?
	CDR	They said they got ...
	LMP	Oh.
	LMP	What - what time is sunrise, Gene? In the Flight Plan?
	CDR	Oh, about ...
	LMP	I'd like to get dark adapted a little bit and look at it, if fits into the Flight Plan.
	LMP	Start about 2 or 3 minutes beforehand. Maybe I can just close my eyes and turn out the lights about a few minutes beforehand.
	CDR	Okay. We got some more stuff after turning the sounder off. You got to wait 1 minute, though.
	LMP	Give me a MARK on it.
	CDR	Okay. I can - 4 seconds -
09 13 54 22	CDR	MARK it.
	LMP	Okay. It's in STANDBY.
	CDR	Okay. It just went all the way. Okay. One minute, Jack, and we'll go through the rest of the stuff.
	LMP	Okay.
	CDR	Wait 1 minute ...

[redacted]

	LMP	Okay, you got - you mean you've still got more besides that?
	CMP	...
	LMP	I've never yet seen a paper tag.
	CDR	I've never seen any.
	LMP	I put a piece of tape on my last one.
	CDR	There's never been any place to mark on the darned things.
	LMP	Is 1 minute up on the minute?
	CDR	Not yet.
	LMP	Then what - what am I going to do?
	CDR	About four or five things.
	LMP	Okay.
	CDR	Couple of - Another 10 seconds, Jack.
	LMP	Okay. Well, I don't know what to do (laughter). I'm ready.
	CDR	Okay. Well, it's not exact minute ... Wait a minute, after 1 minute.
	LMP	Oh, okay. (Chuckle)
	CDR	Okay. Now, you can go RECORDER, OFF.
09 13 55 27	LMP	RECORDER is OFF.
	CDR	RADAR, OFF.
09 13 55 29	LMP	OFF.
	CDR	Ron, get the SM/AC POWER, ON, please.
09 13 55 40	LMP	It's on.

[redacted]

	CDR	Okay. DATA SYSTEM, ON.
09 13 55 43	LMP	ON.
	CDR	MAPPING CAMERA to STANDBY.
09 13 55 46	LMP	STANDBY.
	CDR	IMAGE MOTION, ON.
09 13 55 50	LMP	IMAGE MOTION is ON.
	CDR	LASER ALTIMETER, ON.
09 13 55 55	LMP	ON.
	CDR	IR, ON.
09 13 55 58	LMP	IR, ON.
	CDR	PC SELF TEST, HEATERS.
09 13 56 02	LMP	HEATERS.
	CDR	UV, ON.
09 13 56 04	LMP	ON.
	CDR	MAPPING CAMERA, ON.
09 13 56 08	LMP	ON.
	CDR	Dark out. IMAGE MOTION, INCREASE, barber pole plus four steps and then ON.
09 13 56 17	LMP	Okay. There's barber pole, 1, 2, 3, 4. Okay.
	CDR	Okay. You're GO on the film terminator.
	LMP	Running that camera in the dark, huh?
	CDR	Is that what you got?
	LMP	Where are they?
	CDR	Down there.

[redacted]

	CMP	...
	CDR	Oh, they're in there. Darn, I'm going to use one today, I know. So let me take it out. That's all right. Won't ... 10. Ya'll got all ...
09 13 56 51	CMP	Where you going to stow it?
	CDR	... I got one here, Jack. That leaves - then we ought - Supposedly we're done today, and then we got 2-1/2 days to go.
	CDR	That ought to - -
	LMP	I think - -
	CDR	That ought to hack any emergency.
	LMP	- - the matter is sufficiently well established ...
	CDR	That ought to hack any emergency.
	LMP	... be no bad food that's crept in. ... corn chowder.
	CMP	(Laughter) Watch out.
	LMP	Do you have it in the Flight Plan tomorrow, a point to verify jettison bags - or jettison - or jettis - jettisonable items or something like that?
	CDR	I don't know, but make sure - -
	LMP	We also got to look at items secured and make sure items are secured in the spacecraft.
	CDR	Yes. True.
	LMP	Items tend to float, like loose film packages with the cameras in particular. Do you want some of those ... to hold it?
	CDR	Okay.

[redacted]

09 13 58 37	LMP	That's no question that that aft end forward is a hotter attitude. Boy, I was really warm last night.
	CDR	Were you?
	LMP	Yes. Do I need a barf bag? Might as well keep that for the entry.
09 13 58 54	CDR	You won't barf. You won't even get anywhere near seasick.
	LMP	Oh, I don't know - that kind of predicted weather. This is my Tsiolkovsky pass, isn't it?
	CDR	Yes.
	SC	(Cough)
	LMP	Why don't I put the 250 on it.
	CDR	"Configure camera, terminator photos." That's in standard Flight Plan, and then special for Jack was - -
	LMP	Well, shoot! The trouble with this camera is that you lose two frames every time you make that ... Four frames.
	SC	Oh, yes?
	LMP	Every time you take that mag off. And I've only got 140. So, I'll probably just keep this lens on. ... 250. Four frames, that's maybe up to - then we have probably - -
	CDR	Jack, he gave you a lot of ifs and ands on this ... on the ... If you tell me which ones you use for sure, I'll - -
	LMP	Use mag K and - yes, 250. I'd like to go to 250. I hate to lose those frames, though.
	SC	You really ...

[redacted]

	LMP	Yes, 60 ...
	CMP	... probably ...
09 14 00 14	LMP	Yes, it says there 170, but it may mean that's 30 frames, so I'll lose - -
	CDR	No, you don't ...
	LMP	That's true.
	CDR	Here it is in the Flight Plan. "Configure camera, terminator photos," window 5 - -
	LMP	... my dark slide.
	CDR	- - EL, 250, very high speed black and white.
	LMP	Okay. You got the 250 handy there? Got your dark slide in?
	CDR	Mag RR? Let me change that then. Are you going to use that one? The 250 or the 80?
	LMP	This is K. This is where - this is using this roll.
	CDR	It says 250.
	LMP	This is - I'm using this roll.
	CDR	And, Jack, you got - And, Jack, you got your choice of 250 or - -
	LMP	I'm using this roll. The reason I'm going to use this camera because it has Reseau plate.
	CDR	Oh. And Jack - Ron's working.
	LMP	Oh, he is? Well, how come they gave it optional for me?
09 14 01 43	CDR	Well, because someone - -
	LMP	What are you going to take, Ron?

[redacted]

	CDR	... going to take terminator photo.
	CMP	...
	CDR	This is a regular part of the Flight Plan, but, it's a special update for Jack. ... It gave Jack a choice of the 250 or 80, and it calls for you to have the 250.
	LMP	Well, why don't I just - Why don't I just take - Why don't I just take them all? I'll just shoot up - how many frames? Twelve frames? Ron was programmed for?
	CMP	...
	LMP	What? Of the Tsiolkovsky blanket and terminator?
	CMP	... blanket ... across the Earth. Going to take them all?
09 14 02 37	LMP	Yes, what - about three - three shots per - -
	CMP	Yes. ...
	LMP	Four and a half.
	CMP	Twelve shots, double.
	LMP	Three shots per - up and down, right?
	CMP	...
	LMP	You went up and down four times?
	CMP	... three frames ...
	LMP	Oh, okay. Two pair.
	CMP	Yes, two pairs.
	CDR	Jack, is - is that high-speed black and white the same as very - high-speed black and white?
	LMP	Well, - -

 [redacted]

	CDR	It gives exposure for Ron.
	LMP	Yes.
	CMP	...
	SC	...
09 14 03 17	LMP	Well, let's use the Reseau plate.
	CDR	I think, Jack, - didn't you - did you ask for - -
	CMP	...
	LMP	No, I didn't. That's something somebody's cooked up. But it seems to me like a good idea to use the Reseau plates for a change. They'd be the only ones with the Reseau. And let me get that chart out. What did your exposure say?
	CDR	Yes, that's right, but he's got exposure charts for that - -
	LMP	No, I don't. Not for this. That's just a standard exposure chart.
	CDR	Okay. Calls for you - -
	LMP	Then go up one - one speed from it.
09 14 03 49	CDR	Okay; f ... to 500 was Ron's standard. F ... to the 500. And if you've got the 250 lens, you go from 1/125 to 1/250 or ...
	LMP	I'll take it. ... HBW. Yes. ...
	CDR	What's the exposure chart say for Jack? Let's see ... - -
	LMP	Well, there's no HBW in the spacecraft.
	CDR	I know, but what's the exposure - What's that say when it just gives a change to that?
	CMP	...

	CDR	Well, what is this change, 1/125 to 1/250 ...
	LMP	No, no. They mean this other chart. This one - this one. The printed one. What does that give for the terminator? ... aperatures .. That's what they told me earlier.
	CDR	Okay?
	LMP	So it'll be f/2.8 and what? 1/250, 1/125.
	CDR	It uses 250 at change 1/125 ...
09 14 05 20	LMP	So it looks like 5.6 and 1/250. I can start with a pass at 1 - at 5.6 at 1/125, so, I'll get that much coverage.
	SC	...
	LMP	I'm going to start at 1/125 at 5.6 and then go to 1/250. Get the earliest stuff just past the terminator at 5.6 and 1/125.
	SC	Yes, but it says - -
	LMP	Yes, but that will get me into this block, see. I can't go to four.
	CMP	Oh, okay. See, I can't go to four. 5.6 and 1/125th for my film is the same of f/4 at ... Okay.
09 14 05 54	CDR	Now, will that cover Ron's? I guess it will.
	LMP	It should.
	CDR	That's what I mean. Will it cover Ron's?
	LMP	Yes, save - save that. Yes, we'll use that. Ooops, where's the ring pack?
	SC	...
	LMP	Yes, yes; that's what we used. That's the first ring for the 500. Okay.

[redacted]

	SC	...
	LMP	Okay, now, we may have missed some stuff. Did you figure out what we might have missed with a - with that bad mag? On November November?
	CDR	Jack, what's that mag number? Mag Kilo?
	LMP	Kilo. Yes, sir. And I'm starting at frame 143. And what time is it? 47, you said 52?
	CDR	Yes.
09 14 07 08	LMP	Do I have anything to do over here with the SIM bay?
	CDR	No.
	LMP	I'm going to close my eyes. See if I can remember - -
	CDR	Turn the lights out.
	LMP	Do that, but - -
	CDR	Okay. What's your frame number to start?
	LMP	143.
	CDR	You didn't have to take that SIM bay ...
	LMP	No, I - but the lens and the - as soon as you expose - you see, the whole lens comes out and you expose the plate.
	LMP	There's a glow out there. Can you turn - just turn it down ...
	LMP	Okay. Okay. I already see streamers. I see big - on either side symmetrically around the ecliptic. See those, Geno? You watching?
09 14 08 45	CDR	Okay. I'm looking at ... Is Venus - is Venus - -
	LMP	Venus just came up.

[redacted]

CDR Yes, but is she on the - -

LMP That's on the ecliptic.

CDR Okay; fine.

LMP More or less.

CDR That's pretty close to our ... - -

LMP However, there seem to be two - there's sort of a - a halo out, and then these two major streamers going out, more or less on either side of the ecliptic.

LMP Yes.

CDR And that's about - I don't know. Let me see - let me start a log here.

SC ...

LMP Now, there seem to be a whole - I guess I'm getting dark adapted - but the whole glow - There's the two major streamers, but there seem to be - individual - a lot of small streamers within the glow itself. Unfortunately, I'm fogging up my window by talking about it. The whole glow seems to have a streaming texture to me.

09 14 10 59 CMP Not a whole lot of - Look! I don't see that many streamers in the thing. I see - -

LMP Well, I'm just looking at a very fine pattern compared to the two major ones.

CDR See any - see any kind of ...?

LMP And, now, the one to the - I'm disoriented - I guess that's the - the south is of the ecliptic - to my left, anyway. Spacecraft - minus Y - -

CMP Yes, that should be it.

LMP - - is the - is the dominant streamer to me. Is it to you?

[redacted]

CMP I don't see any streamer. All I see is a glow. All I see - -

LMP That's what I mean is a glow. It's - I shouldn't call it streamer maybe. It's a linear glow - -

CDR I don't see any streamers at all.

LMP - - a linear glow.

LMP I don't even see that. I only see a circumferential glow.

LMP Yes, I do - do that. But I see a linear glow that goes out way beyond that that's to the minus Y of the ecliptic, and earlier I saw - and now it seems to be harder to pick out - but - -

CDR No, I don't see. I don't really see any streamers at all except ... that runs right ... and it's just a very ...

09 14 11 18 CDR Did you photograph all that stuff, Ron?

CMP Yes. I got - I got those photographs red and also blue. And then the sunset on the Hasselblad.

LMP Okay. Mars ought to appear here pretty quick.

CMP Yes. As soon as you see a little bit of a bright - bright glow there on the horizon, don't look anymore.

CDR Yes, sir.

LMP Okay. The whole horizon now has a glow now to it to me. In fact, it has ... - -

CDR Ron, when - -

LMP - - that I can see.

CDR There's very few ... somehow ... glow ...

CMP Yes. Look at it. It's really - really aglow now. Looks to me like I get vertical - radial - radial patterns - streamers going out now.

[redacted]

09 14 12 09	LMP	Well, yes. That's what I thought I'd said I was seeing earlier. I think I might have been a little more dark adapted at that time.
	CMP	Yes, maybe you were more dark adapted than I am, but I can - I could see those vertical - not vertical, but radial - -
	LMP	Radial lines, yes.
	CMP	- - the radial lines, kind of light and dark.
	LMP	Okay. The glow on the horizon now is sharp - to me, is much sharper, much - still a gradational thing from the streamers in. But it's a uniform glow now.
	CMP	Yes, it is. It's a uniform circumferential glow.
	CDR	It spreads out over the horizon right now.
	CMP	Yes. And it spreads - I don't know how you can describe that - but it spreads - spreads out along the surface of the Moon farther than it - than it sticks out above the Moon.
09 14 12 57	CDR	That's affirm.
	CMP	I - Oh, heck, about three times as much, it looks like.
	LMP	Yes.
	LMP	I never did see Mars.
	CMP	Yes, Mars is just now coming up over the horizon there.
	LMP	Now we're starting to get bright spots on the peaks. First bright - -
	CMP	Oh, yes, - that's bright.
	LMP	- - First bright points on the peaks are starting to show - kind of pick up lights.

[redacted]

	CDR	Boy, they really get bright too. Don't they. Now, they're starting to light up along the horizon.
	CMP	Yes.
	LMP	Okay. That one streamer right along the ecliptic now is the strongest. You can see it even down now at the - at the horizon. It's fairly stronger within the glow, to me.
09 14 13 57	CDR	Now you can definitely see it.
	LMP	Yes. Now you can start to see the individual - -
	CDR	...
	CMP	...
	CMP	Okay. That's about it.
	SC	(Laughter)
	CDR	Just before that came over, there's some really good streamers.
	CMP	Yes, which - which says that we probably missed the - the real streamers on the thing because I stopped the sequence about, oh, 6 - What time was it? Seven seconds from - from the Sun coming up.
	CDR	... we've got to find. Just before it came up.
	CMP	Yes, just before it comes up is when you get the real big streamers.
09 14 14 40	CDR	How about your photograph's that you missed?
	CMP	I don't know - yes.
	LMP	No, no, no. Terminator.
	CMP	Terminator. (Laughter)
	LMP	Don't panic me.
	CDR	What?

[redacted]

	LMP	Terminator.
	CDR	Oh, I don't know - I thought we were taking them here.
	LMP	Oh, yes, we are, but we're ...
	CDR	That whole sequence - sequence took from - I started my watch at 5 - to about 6 minutes.
	CDR	You through with that bag ...? ... both second pass.
09 14 16 29	CMP	...
	CDR	After the eat period, we start getting serious about - - ...
	LMP	Eat period? (Chuckle)
	CDR	Yes; start getting serious about TEI.
	CMP	We do?
	CDR	Well, we eat at 34:30 ... an hour and a half.
	CDR	I'm going to try and defecate before you guys eat.
	CMP	(Laughter)
	LMP	That'd be nice.
	CDR	Why do we want to enable all jets here? We want to go pitch and yaw axis coupled; roll axis uncoupled, huh? That's why I wanted to do that.
	CMP	Yes.
	CDR	For tracking.
	CMP	For tracking only. Okay. Are we using these? You change ...
	CDR	Not yet.
	CMP	Okay.

[redacted]

	LMP	Okay. 5.6, 1/125, ...
09 14 19 29	CDR	Ron, I'm going to give you the Flight Plan before I get there, but they're going to give you a call. And we don't want to retract because they want to do something different here.
	CMP	Oh, okay. They'll call ...
	CDR	Not to retract.
	CMP	Okay.
	LMP	Boy, the ejecta blanket's almost all in shadow. ... shot.
	CMP	How do you spell predominant?
	LMP	P-r-e-d-o-m-i-n-a-n-t.
	CMP	Okay. Next time we come around, if we get a chance, I want to take a picture of that just prior to sunrise.
	CDR	Before I enable these jets, we want to get that UV cover closed, Ron.
09 14 22 06	CMP	... Okay. UV is CLOSED.
	CDR	Okay.
	CMP	What about IR?
	CDR	Okay; that's it. Doesn't say anything about IR.
	LMP	That's the end of the mag.
	CMP	It is closed.
	LMP	That's what they want.
	LMP	Now, I need to find a dark slide.
	CDR	"Use A/C ROLL and enable all jets except AC 1 and AC 2 - or A-1 and A-2."

[redacted]

	CDR	A-1 and A-2 -
	CMP	A-1 and A-2 are not. Okay. So, we're using C-1 and C-2. Okay. No, you can turn it off. Change that. Okay. We'll use ...
	CDR	...
	CMP	Okay. ...
09 14 23 22	CDR	Okay, we'll uncouple and roll.
	CMP	Okay. You want to sketch your thing now or ...?
	CDR	Here's the Flight Plan.
	LMP	Okay.
	CDR	Because I'm going to defecate here pretty soon.
	CMP	Let's see. We got anything operating on - is the sounder operating now?
	CDR	No.
	CMP	Okay.
	CDR	It's back in SIM bay configuration. ...
	CMP	I got some terminator photos coming up on this pass. The next one.
09 14 24 58	LMP	Okay. We want to have Papa Papa, though, to try to pick up some of those - - Are we maneuvering? Are we going to maneuver now? Stay in this attitude?
	CMP	No, stay in this attitude.
	LMP	Okay. Let me find my dark slide. I'm not sure - I have one any more.
	CMP	I put the thing in the wrong pad.
	LMP	Huh?

[redacted]

	CMP	I just guess ... two passes, I guess. No, I need a 250 for - Well, we can change the mag at the last minute there. And then we'll put the 250 in the - I've got Papa Papa on here now.
	LMP	Okay.
	CMP	Oh, we need to pick up ...
	LMP	We want to - I want to get that thing or dike if you want it.
	CMP	Yes, thing or dike and listen, I think - I don't know. Wasn't there something else?
	LMP	Yes. You took a couple.
	LMP	I took a couple in there, but I think I - I think the thing just split on yours, you know?
09 14 26 23	LMP	Gene, you want to save this camera?
	CDR	Yes, just put it in our - in the bag with the hand controller or - -
	LMP	Yes, where is that bag now?
	CDR	Well, we don't have it yet.
	LMP	Well, I'll tell you, I'll put it over here to your - -
	CDR	We're going to have to get that stuff.
	LMP	Yes.
	CDR	... put that away, too, a minute. Okay, Ron.
	LMP	Hey, you can put down that mag. Kilo is finished at frame 172.
	CMP	All right.
	CMP	And those were your terminator shots of the rim and wall of Tsiolkovsky. The - most of the blanket was in shadow.

[redacted]

	CMP	Frame what? 170?
	LMP	172 is the last frame. And Gene had down the first one - 143. I didn't think I took that many, but ...
09 14 28 17	CMP	You collaborate or corraborate [sic] or whatever it is on the mud pies in Symthii?
	LMP	Yes, I - They're certainly a different type of crater, and they look as if they're in response to some kind - some other kind of structural medium.
	CMP	Yes. (Laughter)
	LMP	Why they responded that way, though, I don't have any idea.
	CMP	Well, I guess - -
	LMP	One thing that impresses me is that the really - the double ring is - is more an aggregate of roughly concentric ridges rather than single ridge, in several of them.
	CMP	Yes. Yes.
	LMP	Double ridges. They're not truly concentric. Sometimes it slips out to touch the edge of the outer ring, but there are just a whole bunch of little - of ridges roughly in the same shape as the crater but smaller.
09 14 29 11	CMP	Okay. This is Hilbert we're going over now?
	LMP	Hilbert.
	CMP	Hilbert, Hilbert.
	LMP	Hilbert.
	CMP	Hilbert.
	LMP	Hilbert.
	CMP	Hilbert.

[redacted]

	CMP	You know, I can't even see Pasteur. It's got to be in ...
	LMP	I'm looking right into it ...
	CMP	Yes, but it - You know, from this view I'm looking at.
	LMP	It's big. Your - It fills most of your window.
	CMP	Now, wait a minute. Now, which - It's got to be up that way.
	LMP	Right there. No, it's right there - just north of Hilbert, Hilbert.
	CMP	Yes, but I don't see a ring. That's why I don't see the ...
	CDR	Well, check your - check Flight Plan on how we do it.
	CMP	Oh, okay. ... we ought to have them right now. Why don't we?
09 14 29 51	LMP	Power's off.
	CMP	No, I just turned it on. MANUAL and WIDE. Circuit breakers all right? There we go. We were just late, I guess, for some reason.
	LMP	You can tell them that frames on Kilo, prior to 143 - lunar surfaces - whatever that number was, to 143 were selective shots by the LMP. I don't - I couldn't no more itemize, if I had to.
09 14 30 39	CMP	Hey, America - Houston. This is America (laughter). We got you loud and clear here. A little late on picking you up that time but worked okay. Okay. On mag Q, Quebec - it's finished - -

###

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03446

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
09 15 55 08	09 16 32 13

Time good; voice good.

SECURITY CLASSIFICATION

The material contained herein has been transcribed into a working paper in order to facilitate review by interested MSC elements. This document, or portions thereof, may be declassified subject to the following guidelines:

Portions of this document will be classified CONFIDENTIAL, Group 4, to the extent that they: (1) define quantitative performance characteristics of the Apollo Spacecraft, (2) detail critical performance characteristics of Apollo crew systems and equipment, (3) provide technical details of significant launch vehicle malfunctions in actual flight or reveal actual launch trajectory data, (4) reveal medical data on flight crew members which can be considered privileged data, or (5) reveal other data which can be individually determined to require classification under the authority of the Apollo Program Security Classification Guide, SCG-11, Rev. 1, 1/1/66.

GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

[redacted]

09 15 55 08	LMP	Yes, we're right up there ...
	CMP	Okay. What'll you have for breakfast? ... had a pen.
	CDR	Coming up this time around - next rev will be -
	CMP	Okay. Scrambled eggs?
	CDR	Yes.
	CMP	Bacon squares?
	CDR	Yes.
	CMP	Peaches?
	CDR	No.
	CMP	You forgot to eat those, didn't you? Pineapple drink?
	CDR	Yes.
	CMP	Cocoa?
	CDR	No.
	CMP	Vitamins?
	CDR	Yes.
	CMP	Anything else?
	CDR	An orange, drink and coffee.
	CMP	Okay. Let's see, you're having lobster biks - bisque, peanut butter, jelly and bread.
	CDR	... lobster bisque.
	CMP	Cold water.
	CDR	What have I got -
	CMP	Lobster bisque? Peanut butter and jelly.

[redacted]

	CDR	I'm going to eat some tuna fish sandwiches. There's some tuna spread. ...
	CMP	Yuk. (Laughter) Is that all I got? ... lobster bisque ...?
	CDR	And a wetpack? We don't get a wetpack to eat?
	CMP	No, what's that?
	CDR	... just packed a wetpack?
	CMP	... wetpack peanut butter. Peanut butter and jelly, and a piece of bread. What are you going to have? What did you have for breakfast, Jack? Scrambled eggs?
	LMP	Scrambled eggs.
	CMP	Bacon squares.
	LMP	No, I haven't eaten those.
	CMP	Peaches?
	LMP	No.
09 15 56 59	CMP	Orange drink?
	LMP	Yes.
	CMP	Cocoa?
	LMP	No.
	CMP	Let's see, you had a coffee?
	LMP	Coffee, with sugar and cream.
	CMP	Vitamin?
	LMP	Huh?
	CMP	Vitamin?
	LMP	Yes.

[redacted]

	CMP	Let's see, you get peanut butter and jelly, potato soup, cherry bar, and an orange drink.
	LMP	Okay. I'll take that.
	CDR	How come he get's a - a cherry bar?
	CMP	I don't know.
	CMP	Okay. I had bacon and eggs - I had six bacon squares and I lost two of them somewhere. Peaches I didn't get - cinnamon toast, bread, orange juice, coffee.
	CMP	Yes, had two pecans.
	CDR	Do we have any extra bread anywhere?
09 15 58 07	CMP	I think I threw it away.
	CDR	Did you really?
	CMP	Yes.
	CMP	Let's see, you had two pecans.
	SC	... pecans.
	CMP	Peanut butter, wetpack, and a jelly, wetpack, and a white bread - white bread. One white bread.
	CDR	Why can't I use ...
	CMP	Oh, you can. (Laughter)
	LMP	Follow the Flight Plan, Cernan.
	CMP	Is there any extras?
	LMP	Extra what?
	CDR	Well, I don't see any extra bread.
09 15 58 49	CMP	That's what I was wondering. I don't think there is any extra bread.

[redacted]

	LMP	They have us - they have us turning on the TV. They don't have us unstowing it, though.
	CMP	Yes, I think that's the problem. Get that as soon as we can, here.
	CDR	Eat.
	CMP	Eat, then we'll grab it. Pick it up there.
	CDR	Where are the peanut butter and jelly?
	CMP	They are in the wetpack part of it. It says on here somewhere.
	LMP	What should our attitude - do here?
	CDR	P20.
	LMP	Post TEI, I mean.
	CMP	Post TEI?
	CDR	Did you already give someone a meal?
	CMP	No.
	CDR	There is none on here for Jack. (Laughter)
	MS	Maybe it just looks like - Oh well, he's not hungry anyway.
	CDR	There really isn't.
	CMP	(Laughter) Maybe it's just loose in there somewhere.
	LMP	Well - that's what I was thinking - looking.
09 15 59 54	CDR	There really - really isn't a meal here for you, Jack.
	CMP	We just threw everything away.
	LMP	You got an extra wetpack somewhere?

[redacted]

LMP I just stuffed potato soup and stuff up in the garbage bag there. There's some - ...

CDR That's day 12.

CMP ... salad.

CDR It's got to be here somewhere.

CMP It's got to be in here somewhere.

CDR Well, the - What was your meal?

LMP Peanut butter and junk.

CMP Yes. There was a small - just potato soup, I think, - -

LMP And a drink.

CMP Just potato soup and a drink. It should be a small one.

CDR Well, those are all day 12 back there.

LMP Okay. Why don't I retrieve my potato soup - -

CMP Potato soup, peanut butter, wetpack, jelly, and a bread - -

CDR The loop is here, but there's no - -

CMP - - cherry bar, and an orange GF drink.

CDR I lost - All these are meal 12. I'm already down in the meal 12 thing, and there's nothing. The loop is here, but the ...

09 16 01 07 LMP Don't sweat it. I got potato soup in the - in the garbage bag. The package is here.

CDR This may be it. Wait a minute, Jack. No, there's a loop on that one, too. That's not it.

LMP Yes, I got it. I got - I got a meal (laughter) out of the garbage.

[redacted]

	CDR	Well, there are all sorts of wetpacks up in here - not wetpacks but goodies. Jack, I'm not going to eat my peanut butter and jelly anyway.
	LMP	Okay. I got potato soup here.
	CDR	And there's bisque. I don't know if I'll eat it either. Where the heck could that meal be?
	LMP	... grapefruit drink, isn't it. ...
	CDR	No.
	CDR	Now, where do you find the bread? Oh, wait a minute.
	LMP	Thank you. Oh, well. ...
09 16 02 25	CDR	How about these fruitcakes?
	LMP	Hey, there you go. That will be good. Coffee and a grape drink. Well, changed my mind. Is that pretty good, Ron? ... chicken soup?
	CMP	Yes. ...
	CDR	I want to know where - Oh, there's the bread. No, that's not the bread. Where is the bread?
	SC	... commander.
	CDR	No, these are goodies. There's no peanut butter in here. Part of the pantry right here. That's right.
	LMP	I'll look.
	CDR	Back here?
	CDR	No, those are meals - those are day 12 meals I been pulling out. See, I'm already to day 12 over here. Wetpacks. See, these are all snack items. Must be here.
09 16 04 00	CDR	Here they are.
	CDR	Now what do you want, Ron? A piece of bread?

[redacted]

	CMP	... a piece of bread, peanut butter and jelly.
	CDR	Okay. Here's your bread. Better get me some bread. Get me some bread. You want some bread?
	LMP	You're going to give me your peanut butter and jelly, aren't you?
	CDR	...
	LMP	Thank you. ... I don't want to steal it from you.
	CDR	You got your own peanut butter here.
	LMP	Oh, okay. Oh, all right. Great. Thank you.
	CDR	... my part of the jelly.
	SC	(Laughter)
	SC	...
	LMP	Come on, jelly ... I should have my own.
	CDR	Well, yes, but I don't know where they are.
	LMP	You don't want any? ...
	CDR	Pull them out one at a time.
	LMP	Okay.
09 16 05 54	CDR	Here's another jelly. Well, if I do, I'll find - I'll get it out here anyway. Okay. Here's your jelly, Jack, if you want to eat yours.
	LMP	(Chuckle) I don't care.
	CDR	And I'll put mine with my ...
	LMP	You think the water is hot, Ron? Or do you want to squirt a couple of squirts in here to get it hot? Why don't you squirt a few squirts of hot water in here to finish that up. And then you can squirt some more in my - pork and scalloped potatoes here.

[redacted]

	LMP	How about a bag of coffee, Gene, before you finish up here.
	CDR	Okay.
	CDR	I'm not sure that'll flow.
09 16 07 58	CDR	Get in there!
	CMP	Wow! (Laughter) ...
	LMP	Thank you, sir.
	CDR	What?
	SC	...
	CDR	... made by General Mills ...
	LMP	The quick kick? Made for the Oilers?
	CDR	Well, if the Oilers drink it, I wouldn't, based upon their performance (laughter).
09 16 11 21	LMP	Based on ... performance, if I were them, I wouldn't do anything (chuckle).
	LMP	... Performance ... to be eating.
	LMP	(Cough) Where is my chocolate bar?
	CDR	Better find it. It was the last one that was in there.
	CMP	You had a chocolate bar?
	SC	No ...
	LMP	You find your scissors, and you find your bread.
09 16 13 14	LMP	One of my classmates, when I was in college, always lost things. He lost everything he owned. He was a geologist. Out in the field one summer he proceded to tie everything to one long line of fishline. He walked around in the field with his hammer and his hand lens and his

[redacted]

brush and his notebook and everything all tied to one line. (Laughter) It was quite a sight.

But he went through - he lost one of everything that a geologist can have that summer. And he finally ended up in that mode.

LMP ... burn goes right. It's our last big one.

CDR Like what?

CMP Find the scissors (chuckle).

LMP You should have kept your mouth shut. You didn't have to - you're the one that told the world about it.

CMP (Laughter)

LMP I couldn't believe that when you actually admitted it.

CMP (Laughter)

LMP Do you realize those scissors became more valuable than the polarizing filters because we compromised our activities on the surface for the scissors.

CMP Really?

LMP We didn't for the polarizing filters (chuckle).

SC Scissors, checklist ...

09 16 16 21 LMP Half the FAOs effort was to make sure we didn't forget the scissors each time (laughter).

SC ...

CDR ... carrying them around with us all the time. We weren't ... losing them.

LMP We did. - the first thing we did ..., the ... first EVA they fell out of the bag and they were lying there in the dirt (laughter).

[redacted]

	CDR	In the dirt and had something covering them up ...
	LMP	Yes.
	CMP	(Laughter)
	LMP	The first objective of that EVA was to recover the scissors.
	CDR	Find that piece of bread I had ... peanut butter to go with it.
	CDR	If you don't like tuna so much, how come I'm eating your can? No, no, they all got white around here.
	CDR	...
	LMP	They did. Ron threw it away (laughter).
	SC	All right.
	LMP	Need some extra?
	SC	No ...
	CDR	You don't have a cracker, do you, Ron? Or a fresh tomato or something? Cracker or a fresh tomato or something?
	LMP	Here's old Tsiolkovsky. One more time. ... but we got to get ...
	CDR	Wait until 25:30. ... We start to work.
	LMP	Okay.
09 16 19 58	CDR	I'm watching attitude, but the ...
	CDR	... a beer now and then would sure go good.
	CDR	Man, that's a ... crater.
	LMP	What?

[redacted]

	CDR	...
	LMP	Oh, that's one.
	CDR	Huh?
	SC	...
	CDR	4000? Entry 4000?
	LMP	Yes, here we are.
09 16 22 40	LMP	Pretty high-speed film.
	LMP	... 43.
	SC	...
	LMP	Oh, is that all?
	LMP	Ron, you got any hot water left down there?
	LMP	No, no, wait. I think -
09 16 26 12	CDR	You know that was the last Saturn V to rise.
	LMP	Yes.
	CDR	Starts coming up at seven and light's on at four.
	LMP	... sort of ...
	CDR	Jack's totally in a blind over there. I know how you feel you don't have anything but your - your - -
	SC	... gravity field ...
CDR		You're out - you can't see. You don't have any - you don't have any ...
	CMP	... And you're just really hanging on for the ride. (Laughter) Yes, at least Ron and I know he knows what altitudes ... You don't even have a feel for that. You can look at the computer every once in a while unless you got a feeling

[redacted]

		you can ... No, you just don't have any physical cues, except that we're going. No more ... pressure change.
	CMP	(Laughter)
	LMP	Cabin pressure?
09 16 27 48	CDR	I don't understand. We had little or no ... forecast up here and I had 25 on the - 25 percent on the - when it - that first came up - 25 percent on the angle of attack, but the needle wasn't - oh, maybe a degree. PITCH needle was a degree off. YAW was right in. And it stayed up to 25 for a while, and then she dropped slowly on back. ...
	SC	...
	CDR	Yes, that's the way I remembered the - Man, it really gets rough ... and then I remember the S-II just the way it was. A big long ... But the S-I, it shakes and rattles and gets it's big muscles going and then it starts really hauling. And then it busts up against ... Max Q. And once you get through max Q, then it also quiets down and starts hauling.
09 16 29 01	LMP	There they are.
	CDR	All right.
	LMP	Hello, Houston. This is America.
	CMP	What happened to my tea bag? I think I lost my spots. (Laughter)
	CDR	Put it under there. Bag ...
	CMP	Oh, there it is.
	LMP	Hello, call Houston. America. Over.
	CDR	We got another 15 or 20 minutes to eat. ... configuration.

[redacted]

	LMP	What are your angles?
	CDR	Minus 10 and 25, REACQ and NARROW. Minus 10 and 25, REACQ and NARROW.
	CMP	...
	LMP	It's just not matched yet.
09 16 31 14	CMP	You ... by MANUAL and WIDE first and then REACQ and NARROW, don't you?
	CMP	Oh, okay - -
	CDR	HIGH GAIN, MANUAL, minus 10; and then REACQ and NARROW ...
	CMP	Okay; that's because - that's because it's an eat period and it takes a little bit longer in that position, bounces back and forth. If you went to MANUAL and WIDE, those values ... now, then it'll pick it up. And then go back to REACQ and NARROW.
	CDR	He's right. You can't argue with success.
	LMP	Hello, Houston; America.
	CMP	...
09 16 32 13	LMP	... nothing to do anyway.

# # #

[redacted]

(This page Unclassified)

Tape 17-03447

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING LUNAR ORBIT 75 AND TRANSEARTH COAST

Time Segments (AET)

From	To
09 17 55 45	09 18 25 50

Tiem and voice good.

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[redacted]

09 17 55 45	CDR	Good. Okay; TVC SERVO POWER, AC 1.
09 17 55 49	CMP	Okay; there's AC 1.
	CDR	And AC 2.
09 17 55 51	CMP	AC 2.
	CDR	Okay. ROT CONTROL POWER to DIRECT's, AC.
	CMP	Okay.
	CDR	NORMAL, AC; DIRECT's, OFF.
09 17 55 57	CMP	NORMAL is AC; DIRECTs are OFF.
	CDR	Okay; BMAGs, 1/2.
09 17 56 01	CMP	Okay; BMAGs are uncaged.
	CDR	Okay; SPACECRAFT CONTROL, SCS.
09 17 56 07	CMP	Okay; STS [sic].
	CDR	Arm your ROT CONTROLLER.
09 17 56 09	CMP	It's armed.
	CDR	Okay. Start your motors.
	CMP	Okay; PITCH 1 -
09 17 56 13	CMP	MARK it.
	CDR	Got it.
	CMP	YAW 1 -
09 17 56 15	CMP	MARK it.
	CDR	Got it. Okay; plus - Let's see; verify trim. Control and set.
09 17 56 20	CMP	Okay.
	CDR	Plus 0.63.
09 17 56 23	CMP	Plus about 0.6.

[redacted]

	CDR	And plus 0.86.
09 17 56 26	CMP	0.86 is almost 9 - is about right there.
	CMP	Okay; verify ... .
09 17 56 33	CMP	It's a minus, plus; minus, plus. Okay; you try yours?
	CDR	Okay.
	CMP	Okay; both work.
	CDR	Okay. Put that - put that at 0.8. You got 1.8. That's where you had it set.
	CMP	Right here?
	CDR	Go to plus 0.86.
	CMP	Okay; thank you. Okay.
	CDR	And plus 0.6.
	CMP	And a plus 1 - okay, 0.6. Okay.
	CDR	That looks good. SPACECRAFT CONTROL to CMC.
09 17 57 07	CMP	Computer has it.
	CDR	Okay; clockwise.
09 17 57 11	CMP	Okay; clockwise.
	CDR	Verify no MTVC.
09 17 57 13	CMP	No MTVC.
	CDR	Got PITCH 2 and YAW 2.
	CMP	Okay; PITCH 2 -
09 17 57 16	CMP	MARK it.
	CDR	Got it.
	CMP	YAW 2 -

[redacted]

09 17 57 19	CMP	MARK it.
	CDR	Got it. Okay; set trim.
09 17 57 22	CMP	Okay; we'll try a little trim.
	CDR	Plus 0.6.
09 17 57 25	CMP	Plus 0.6.
	CDR	Plus 0.9.
09 17 57 29	CMP	And a plus 0.9.
	CDR	Verify MTVC.
09 17 57 35	CMP	Okay; plus - it's a minus, and a plus.
	CDR	Here, let me get my - -
	CMP	Okay; you got it?
	CDR	Okay, my ... is locked.
	CMP	Okay. And trim looks good. Okay.
	CDR	Okay. HAND CONTROLLER, neutral.
09 17 57 49	CMP	Okay; neutral. Computer has it - -
	CDR	Verify no MTVC.
09 17 57 52	CMP	No MTVC.
	CDR	Verify GPI returns to zero.
09 17 57 55	CMP	Returns to zero.
	CDR	Okay; ROT CONTROL, AC, DC.
09 17 58 00	CMP	AC, DC.
	CDR	DIRECTs, MAIN A/MAIN B.
09 17 58 03	CMP	Yes, I'll put the DIRECTs - both of them ON.
	CDR	Okay; BMAGs to RATE 2.

[redacted]

09 17 58 06	CMP	BMAGs are RATE 2.
	CDR	Okay; I'm going to trim.
	CMP	Okay.
09 17 58 15	CDR	Okay; she's trimmed. BMAGs 1/2.
	CMP	Okay. Did you get a 618?
	CDR	Just one. Just the last one.
	CMP	Okay.
	CDR	Here she is.
	CMP	Yes.
	CDR	BMAGs 1/2.
09 17 58 25	CMP	Okay. BMAGs, 1/2.
	CDR	Okay; I'm going to ENTER. You ready for your Auto test?
	CMP	Okay. Let's try her.
	CDR	Okay; PRO.
09 17 58 34	CMP	Plus 2, minus 2, zero; plus 2, minus 2, zero.
	CDR	Okay, baby.
	CMP	2, 3, 4, 5. Here we go. Ha-ha! ...
	CDR	About 0.7 and - -
	CMP	0.7 and - -
	CDR	- - 1.0
	CMP	- - 1.0; something like that. That was good; that was close.
	LMP	Everything looked good over here on it.
	CMP	Okay.

[redacted]

	CDR	Okay. RATE, HIGH. SCALE, 5/1.
09 17 59 06	CMP	SCALE, 5/1.
	CDR	RATE, HIGH?
09 17 59 08	CMP	RATE, HIGH.
	CDR	Okay; EMS mode. Stand by for 1 minute.
	CMP	Stand by until 1 minute?
	CDR	NORMAL and THC POWER, ON at 1.
	CMP	Right.
	CDR	Okay; after, you'll pick up at DELTA-V THRUST A.
	CMP	DELTA-V THRUST A at 0.05 g - I mean average g.
	CDR	Okay.
	CMP	Average g.
	CDR	Pick up 4-jet ullage at 12 seconds, and I'll get the PRO.
	CMP	Okay; 4 jets; 12 seconds. (Humming)
	CDR	Two minutes.
	CMP	Two minutes; okay.
	CDR	Attitude looks good. How does your GDC look to you? Why don't you just doublecheck it?
	CMP	... right here. PITCH there and there. Go to GDC. Align the old GDC at the last minute. Okay; she's looking good. It's drifted a little bit from where we uncaged it. ... and we'll be right together.
	CDR	Okay.
	CMP	Okay. 5/1; 1/2; CMC; GDC; MANUAL ATT is RATE COMMAND: ATT DEADBAND, MIN; RATE to HIGH;

[redacted]

		TRANS CONTROLLER POWER's OFF; AC/DC; AC/DC; DIRECTs; DIRECTs; CMC in AUTO; ATT 1/Rate 2 on 3; RATE COMMAND; GIMBAL MOTORS; CSM to AUTO. Okay.
	CDR	Okay; at 1 minute we'll pick up EMS to NORMAL and TRANS CONTROLLER POWER, ON.
	CMP	Okay.
	CDR	Our time is 2 plus 25.
	CMP	Okay.
09 18 01 11	CDR	MARK it. One minute. NORMAL.
09 18 01 13	CMP	Okay; EMS is NORMAL.
	CDR	And verify NORMAL.
	CMP	TRANS CONTROL POWER is ON. And TRANS CONTROL is armed.
	CDR	Okay; at 12 seconds you pick up - at average g, you pick up DELTA-V_A, and at 12 seconds, pick up 4 jets.
	CMP	Okay. And you're on the DELTA-V THRUST switch. DELTA-V THRUST A switch, that is.
	CDR	Okay; you guys ready? Here comes average g.
	CMP	Okay.
	CDR	DSKY, blank. Okay; here's average g.
09 18 01 44	CMP	Okay; DELTA-V THRUST A is ON.
09 18 01 45	CDR	DELTA-V THRUST A is NORMAL.
	CMP	Four jet; 12 seconds, right?
	CDR	Four jet at 12 seconds.
	CMP	Okay.
	CDR	And you are in ATTITUDE RATE, right there.
	CMP	16, 15, 14, 13 -
	CDR	Okay; 12 seconds. You have ULLAGE.

[redacted]

	CMP	See the rates get up?
	CDR	...
	CDR	VERB 99.
	MS	3, 2, 1 -
09 18 02 12	CMP	Okay; there goes the thrust.
	CDR	...
	CMP	Okay, - ... B is ON. Ho, ho, we're going!
	CDR	Okay; you got a little - -
	CMP	Okay; looks good.
	CDR	- - less than 1/2 a g.
	CMP	Okay.
	LMP	Pressures are good. Yes.
	CDR	Okay. Attitude looks good.
	CMP	Okay.
	CDR	CMC and EMS are GO.
	CMP	Okay.
	CDR	I'll give you a first cut at the burn time here in a couple of seconds.
	CMP	Okay. Looking good. A little more of ... burn ...
	CDR	... about 223 your first cut.
	CMP	Beautiful pitch oscillation.
	CDR	Okay. You watch attitude, and - -
	CMP	Okay.
	CDR	- - I'll watch EMS at the computer.

[redacted]

	CMP	... roll that time.
	CDR	Okay.
	CMP	Okay. It rolled a different way (laughter). The computer - the ... left.
	CDR	Okay.
09 18 02 50	CDR	MARK it. EMS and CMC are GO.
	CMP	Okay. Chamber pressure is up around 93. We're in good shape.
	CDR	Okay. You got all your balls and all your pressures, Jack?
	LMP	Everything's great.
	CDR	Okay.
	CMP	Okay. Looking good. Ready to go.
	CDR	Okay; CMC and EMS are right together.
	CMP	Okay.
	CDR	I'll give you another hack here at what the computer expects it to be. 1 - 224 is what it expects.
	CMP	Okay. Roll at the left ... is going back the other way now.
	CDR	Okay.
	CMP	And it's rolling at a rate of around 0.2 of a degree per second.
	CDR	Burn time may be about a second no - shorter than nominal, and EMS and CMC are still GO.
	CMP	Okay. Still looking good.
	CDR	Four degrees, starting to accelerate now; it's 14.

[redacted]

	CMP	Yes, it's up almost a half a g.
	LMP	About a minute to go.
09 18 03 38	CDR	Okay. It looks good, Jack.
	LMP	Thirty seconds ahead.
	CDR	Burn time now is - shutdown is burn time plus 2 seconds and a minus 40 on the EMS.
	CMP	And a minus 40. Okay.
	LMP	Half a g feels like a lot, doesn't it?
	CMP	Yes, it sure does. Wonder what entry is going to feel like.
	LMP	A lot.
	CDR	Both the EMS and CMC are GO, Ron.
	CMP	Okay; they're looking good. Attitudes are pretty good. There's a little yaw drift and - -
	CDR	I'll give you one hack at 20 some odd seconds here - -
	CMP	...
	LMP	Thirty seconds.
09 18 04 08	CDR	Computer's a little less than you, Jack. I'll tell you right - Computer says 23. Computer says 2 plus 23. Okay; Jack, the count is all yours whenever you want to pick it up - -
	LMP	Okay.
	CDR	- - and CMC and EMS are GO.
	CMP	Okay.
	CDR	Stand by to back it up.

[redacted]

	CMP	I'll back it up.
	CDR	Plus 2 seconds and minus 40.
	CMP	Okay.
	LMP	Ten seconds, 5 seconds, 4, 3, 2, 1 -
09 18 04 36	LMP	ZERO.
	CMP	Okay; shut down to 23.
	CDR	Twenty-three is closed.
	CDR	Okay; great.
	CMP	30470. And I'll proceed off that to get the latitude ... Okay. Let's see; I got a plus Y; don't trim. Let me get back to attitude.
	CDR	Okay; no trim. You didn't trim, did you?
	CMP	I didn't trim. No.
	CDR	Okay.
	CMP	Yes, we got a little bit of Z in there. That's why I wanted to get back to attitude for.
	CDR	That's just - You want it within 0.2. Okay; you're there.
	CMP	Okay; we're there.
	CDR	Happy? Let's see.
	CMP	Let me zap it just a sukosh there. Let's see, attitude - -
	CDR	Looks okay.
	CMP	That's all right.
	CDR	I have 2 plus 7 and ... residual.
	CMP	Okay, Jack; YAW 2.

[redacted]

	LMP	Go.
	CDR	Okay -
09 18 05 24	CMP	MARK it.
	LMP	Got it.
	CMP	... two.
09 18 05 25	CMP	MARK it.
	LMP	Got it.
	CMP	One.
09 18 05 27	CMP	MARK it.
	LMP	Got it.
	CDR	184.
	CMP	One.
09 18 05 30	CMP	MARK it.
	LMP	Got it
	CDR	184.
	LMP	Got it.
09 18 05 32	CMP	Okay. SERVO POWER is OFF.
	LMP	You ready for the BUS TIEs?
	CMP	Let's see.
	CDR	...
	CMP	Yes. You turn the BUS TIEs off.
09 18 05 43	LMP	Okay. B is OFF.
	CDR	359. Okay.
	CMP	...

[redacted].

09 18 05 48	LMP	BUS TIEs are OFF.
	CMP	Okay. ... POWER is OFF. ...
	LMP	POWER looks good.
09 18 05 53	CMP	..., OFF. DIRECT ULLAGE circuit breakers are OPEN. PITCH 1 and YAW 1 are OPEN.
	SC	...
	CMP	Okay; you got the minus 18.1 on the DELTA-V?
	SC	(Cough)
	CDR	Yes.
	CMP	Okay; SP ... - -
	CDR	Two plus 0.3, Jack, is what I calculated right on the money.
	CMP	(Coughing)
	LMP	Count 23; that's exactly what I had.
	CDR	That's what the computer was going to. VERB 66 is in.
	CMP	Let's see, BUS TIEs, you got those OFF? BIT RATE to LOW.
	LMP	BIT RATE - No, they want it in HIGH. They said leave it HIGH.
	CMP	Oh, leave it HIGH; okay. Okay; check the SIM bay.
	CDR	VERB 25, ENTER.
	LMP	Okay. SIM bay is going to be checked.
	CDR	Plus 34500.
	CMP	Okay. ...

[redacted]

	CDR	Plus 122500.
	CMP	Okay.
	CDR	And plus 32000.
09 18 06 38	CMP	That looks good.
	CDR	Okay; you caged?
	CMP	Caged; ready to go.
	CDR	CMC in AUTO?
	CMP	CMC in AUTO.
	CDR	Okay; let's get over there. I'm ready; here we go.
	CMP	Okay. Let's see, I forgot - you - you use PD ... Okay.
	CDR	We're at - No - no, you're PD. You use a PD - use PD.
	CMP	Okay. I'll turn AC, OFF. No trim; how about that!
	CDR	That's outstanding.
09 18 07 01	CMP	Outstanding! Ha, ho, beautiful!
	CDR	Boy, that half a g sure felt like quite a bit, though.
	CMP	Yes ...
	CDR	Let's get some things set up. Jack, when you get that cue card set up, let me know. You want to stay in HIGH.
	LMP	Yes.
	CDR	Yes, HIGH.
	LMP	Post SPS burn has to come ...

[redacted]

	CDR	We'll start working on the TV.
	LMP	TV is ready to go.
	CDR	Okay. And after we get to attitude, you can "inhibit all jets except," Ron.
	CMP	Okay.
	CDR	Okay; and we got - UV COVER, OPEN?
	CMP	Okay.
	CDR	Well, wait a minute. Wait til the jets get - wait until we get there. We ought to wait until we get to attitude.
09 18 07 38	CMP	Yes, as soon as we get to attitude, we'll open those things.
	LMP	Okay.
	CDR	We're on our way home, guys.
	CMP	Hot dog!
	CDR	We're on our way home.
	LMP	Yes, sir.
	CDR	I'll tell you, it's good to be on your way home, boy.
	CMP	Good to be on your way, but there's a little extra load up there, though.
	LMP	Hey, here comes the Sun.
	CMP	Give me a ... back on? Yes, it's too late (laughter).
	LMP	Snap.
	CMP	(Laughter) That's right. Maybe ... Let's see, I got everything off, I think.

[redacted]

09 18 08 28	CDR	Okay. Did - Make sure you got everything off on this side, your BUS TIEs and the whole works.
	CMP	Can't see a thing; looking right in there. Okay; DELTA-V THRUST - Yes, that's OFF. GIMBAL MOTORS are OFF. We got those. ...
	CDR	On the TV switch, you got to worry about getting the S-BAND AUX to TV and TV to ON.
	CMP	... Yes, we could do that now.
	CDR	Yes, you can turn that on, except the - Turn the TV on. We have closed circuit.
	CMP	Yes. Get closed circuit.
	LMP	Okay; monitor power is on.
	CDR	We want to go to 3.5, 1.5. Watch that gimbal lock.
	SC	(Sneeze)
	CMP	Supposed to make it. It'll stop - -
	CDR	AOS is at 55; that's 6 minutes.
	CMP	55, huh?
09 18 09 20	CMP	There's the old terminator.
	LMP	Give me - Make sure I have about 90 seconds prior to - couple minutes prior to AOS to warm up the ...
	CMP	Warm up what?
	LMP	Warm up the ...
	CMP	Let's turn it on now. Turn it on now.
	CDR	You can turn it on now.
	LMP	Well, okay.
	CDR	Turn it on ... Don't point that thing into the Sun, though. That's one thing you really want to watch.

[redacted]

	CDR	I guess we're going to fly right ...
09 18 10 21	CMP	Yes. We're going to fly right up the terminator.
	CDR	Okay; 345 ...
	CMP	There is a ...
	CDR	We're almost there.
	CMP	Look at the chamber pressure; it's back to zero now. Boy, you sure lot - left a lot of junk back there from that SPS burn. ... to go.
	CDR	... not a very good attitude from here so far.
	CMP	Sure as heck doesn't, as a matter of fact. ... See, we go up pretty fast. I could see it out of this window. And we're starting to rotate around. We should see out window 3.
	LMP	I'm going to leave the handle up for a while.
	CMP	Okay; we're at attitude.
	CDR	We are now. Okay; Ron, you want to inhibit all jets except D-1 and B-2.
	CMP	Do you want Dog 1 - -
09 18 11 32	CDR	Inhibit them all. Leave D-1, ON; B-2, ON; A-3, ON; and C-4, ON; B-3, ON; and D-4, ON.
	CMP	Okay.
	CDR	So, tell me which ones you've got on.
	CMP	... complete. Well, except for one row there. Okay.
	CDR	You got D-1, B-2, A-3, C-4, B-3.
	CMP	Yes.
	CDR	And B-4.
	CMP	Yes.

[redacted]

	CDR	Okay. Now you can get those covers open, Jack.
	LMP	Okay; I'm going to give the camera to you then. And it's all set on the lunar setting. Might want to snake that cable around a little bit.
	LMP	Lost my ...
	CDR	Okay; UV COVER, OPEN. And IR COVER, OPEN.
09 18 12 21	LMP	Okay. UV is OPEN.
	CDR	IR, OPEN.
09 18 12 28	LMP	IR is OPEN and both are gray.
	CDR	MAPPING CAMERA/LASER ALTIMETER COVER, OPEN.
09 18 12 33	LMP	And that's OPEN.
	CDR	Okay; you want to go to - MAPPING CAMERA, EXTEND.
09 18 12 39	LMP	Okay; MAPPING CAMERA is EXTENDED. Barber pole.
	CDR	Okay; AUTO and NARROW for acquisition, and we're all set. We're not acquisition yet but - Oh, this is all ... around here.
	LMP	Okay; after MAPPING CAMERA, EXTEND ...?
	CDR	Let me get the camera through here, Jack. ... able to move.
	CMP	We're at the wrong attitude.
	LMP	How did that happen?
	CDR	You can unplug it ...
	LMP	Well, why don't - -
09 18 13 17	CMP	Can you guys see something - out of window 3? Just put it in STANDBY, and it doesn't transmit.
	LMP	Yes, just ... Okay, you're ... to STANDBY?
	CDR	Yes, I guess I got to take the switch off.

[redacted]

	CMP	What do you have to do, unplug it?
	LMP	That should get it.
	CMP	Are you sure you can see the Moon out of window 3?
	LMP	Need some more?
	CDR	No ... That's good. Yes, that's good. ... We won't worry about that. Put your hand controller down. There you go.
	CMP	... over there. Here's where we're going.
09 18 14 15	LMP	Okay. You're plugged back in.
	CDR	Okay.
	LMP	And you ... your picture.
	CMP	... okay.
	LMP	You got the ... Yes, that's for outside, though. It's not inside ...
	CDR	No, it's ...
	LMP	You got part of the Moon out of that window there now.
	CMP	Yes. You got out of window ... 3?
	LMP	...
	CMP	There's Sklodowska.
	LMP	Yes. That's good. Excellent.
	CMP	There's Sklodowska. I can see it.
	LMP	Perfect.
	CMP	Is the picture good?
	LMP	Yes.
	CMP	Okay; great.

[redacted]

	LMP	Okay. I'll let you know when we got AOS.
09 18 14 50	CDR	I can tell we's coming home. Boy, is - that one-half g surprised me.
	CMP	Me, too.
	CDR	That was fairly ...
	CMP	Yes.
	LMP	I was trying to hold my head up, but I finally gave up.
	CMP	(Laughter) Yes, I did, too. I finally relaxed and put my head down.
	LMP	Okay; they're there. Give them a picture.
	CMP	They're there?
	CDR	Yes.
	LMP	... signal strength?
	CDR	We want to go NARROW and AUTO for acquisition.
	LMP	We're there.
	CDR	AUTO and NARROW?
	LMP	Yes.
09 18 15 22	CDR	Let's go AUTO. Oh, you're in AUTO. Oh, okay. Hey, Ron.
	CMP	Moving up. ... have a tape recorder. Son of a gun.
	LMP	You're not in the picture. You can't get - -
	CMP	Yes, they don't have - -
	CDR	Hello, Houston; this is America.
	CDR	47 and 250.

[redacted]

	CMP	There you go. You know you got the right button this time.
	LMP	Yes, we're not peaked out.
	LMP	What's the deal, Ron?
	CMP	... reacquire, Jack. Go to MANUAL and WIDE and then -
	LMP	You think that'll do it, huh?
	CMP	Yes. And then try REACQ and NARROW.
09 18 16 36	LMP	Well, they wanted AUTO.
	CMP	Well, give it - give it -
	LMP	Wait a minute. It's starting to drift.
	CMP	Okay.
	CDR	It says 47. Did you want REACQ or AUTO?
	LMP	Well, they asked for AUTO.
	CMP	They asked for AUTO, but stop - pause in the MEDIUM. See, when you - -
	LMP	Pause in the medium?
	CMP	Yes, pause in the medium a little bit.
	LMP	I thought the medium didn't make any difference ...
	CMP	Well, it really doesn't, but it gives it a chance - -
	LMP	There you go.
	CMP	There you go.
	LMP	Wait a minute.
	CMP	Yes.
	LMP	No -

[redacted]

	CMP	... we lost them.
	LMP	They dropped off.
	CMP	We lost them. (Sneeze)
09 18 17 16	CC	America, this is Houston. We'd like the high gain, please.
	LMP	Roger, Houston. There you go.
	MS	(Laughter)
	LMP	I need the ...
	CDR	Can't pick it up.
	SC	(Cough)
	CDR	Houston, do you read America?
	CC	That's affirmative, America. We have a picture. Over.
	CDR	Roger, Houston. America has found some fair winds and following seas, and we're on our way home.
	CC	Okay; that's great news.
	LMP	There you go.
	CDR	It sure is, Gordo.
	CMP	You betcha, by golly. It's outstandingly good. That was a good burn, too. We'll give you the burn report in a bit.
09 18 18 28	LMP	Here comes Tsiolkovsky ... You can give it to them if you swing over - -
	CDR	I'm looking at it. I'm looking at it.
	LMP	Yes, but if you move and look out - -
	CDR	No, I got to be in the ... right here.

[redacted]

	LMP	Do you have Tsiolkovsky ... How'd you do that? No, that's not Tsiolkovsky.
	SC	...
	LMP	Well, I'm not sure - Tsiolkovsky is down in there.
	LMP	There you go. Might zoom - zoom in just a little.
	CDR	Okay, Houston. I'm going to try and give you Tsiolkovsky from about the nadir.
	CDR	... focus?
	LMP	Focus ... Yes, no - no, zoom is down in the next middle one. Yes.
	CMP	Yes. That's zoom.
	LMP	Well, but I mean open it - give them a full view. You have to unzoom it.
	CMP	There you go.
09 18 19 50	CDR	Houston, this is a grand place to be right now.
	CC	I'll bet it is, and we've got a great picture of Tsiolkovsky. Got it right in the center, and good focus. Great picture.
	CDR	I know there's not as many smiling faces down there as there are up here, but we're making up for the difference in numbers.
	CC	Roger.
	CDR	Gordo, I'll give you a quick burn report. The burn was on time. Burn time was 2 minutes and 23 seconds. Delta-V_{GX} was 3047.0. Attitude at the end of the burn was 184, 005, 359. That's 184, 005, and 359. There was no trim. The residuals are minus 2, plus 0.7 - Correction, minus 0.2, plus 0.7, and plus 0.2. Delta-V_c was minus 18.1.
	CC	Roger. We got those.

[redacted]

09 18 21 15	LMP	And, Gordy, the unbalance is about 30 pounds, and oxidizer is 2.8, and fuel 2.9. And I blew FULL DECREASE the whole burn.
	CC	Roger, Jack.
	CMP	How's the picture look, Gordy?
	CC	Red fine.
	CDR	I'd like to tell you exactly what we're looking at, but I can't quite see it.
	LMP	Gordy, the country Gene's pointing out is south of the orbit that we're been following for several days, and Ron even more than Gene and I. And it's some of the - striking country of the far side of the Moon that human beings don't very often have a chance to see, but a trend's been started in the last few years, and I suspect it will continue.
	CC	Roger, Jack.
	CDR	Gordy, America performed superbly.
	CC	America, Houston. We need PAN CAMERA OPERATE now.
	MS	(Laughter)
	CDR	Thank you. PAN CAMERA's going to OPERATE.
	LMP	Anything else?
	CDR	Well, ... all these other ...
	CC	And can you verify that you got the other SIM bay items that precede that?
	CDR	We're verifying that right now.
	LMP	Go ahead. Read them.
	CDR	Okay. PAN CAMERA, STANDBY. MONO.
09 18 23 26	LMP	Okay; it's STANDBY, MONO.
	CDR	POWER.

[redacted]

09 18 23 28	LMP	POWER.
	CDR	V/h, HIGH ALT.
09 18 23 30	LMP	HIGH ALT.
	CDR	MAPPING CAMERA, ON.
09 18 23 32	LMP	MAPPING CAMERA is ON.
	CDR	IMAGE MOTION, INCREASE plus three ... steps. And then OFF.
	LMP	Do you want barber pole?
	CDR	Yes. No - Barber pole plus three steps.
	LMP	Okay.
	CDR	Yes. And then it's OFF.
09 18 23 50	LMP	Okay; it's OFF.
	CDR	And PAN CAMERA to OPERATE.
09 18 23 55	LMP	Okay. And it's OPERATE. And it's gray.
	SC	...
	LMP	Okay, Gordy. The SIM bay should be squared away. Pardon our - -
	CMP	I can't -
	CC	Okay; thank you.
	LMP	- - slowness there.
	CDR	Gordo, I'll try and take you across the terminator, if I can.
	CC	All right.
	CMP	If I could - one crater I know.
	LMP	We're seeing country south of Tsiolkovsky now that we've never seen before.

[redacted]

	CMP	Where is Tsiolkovsky?
09 18 24 37	LMP	Right down out of my window.
	CMP	Oh. Okay; and then we're looking south, right?
	LMP	Yes, yes. And when we got a picture of Tsiolkovsky back, I think maybe even you can see one of the things that both Ron and I have noticed about it is, number 1, it's a basin that is comparable in its freshness and apparent age to the - probably the Imbrium Basin on the near side of the Moon; and, secondly, it has an unusual area in its northeast quadrant that - from which the blanket is excluded. There is an apparent slide. We're not sure what it is, but the normal indications of an ejecta blanket are just not there.
	CC	Roger that, Jack, and we can see those features you just described.
	LMP	Okay, and for your - for your - for your - -
	CC	The camera - if you can figure out a way to hold it a little steadier, that would help, but we're getting good resolution.
09 18 25 50	CDR	Okay, Gordo, I'm working on it.

# # #

[redacted]

(This page Unclassified)

Tape 17-03448

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
09 18 25 56	09 18 53 57

Voice good; time good.

SECURITY CLASSIFICATION

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[redacted]

09 18 25 56	CDR	- - however many days we've been there could find it, don't you? Huh. I can't see anything.
	CMP	When you see Tsiolkovsky south, the potential peaks form an arrow that points south, Gordy.
	LMP	Which way is north or south ...
	SC	Still not Tsiolkovsky.
	LMP	What did you do, zoom?
	CMP	Yes, I'm looking right at Peacock.
	LMP	Oh, you're - Oh, I see. Oh we're moving away.
	CMP	(Laughter)
	LMP	That points south? That full zoom? Okay; there you go.
	LMP	Where's your camera? There, I can't see anything over here, so -
	LMP	Yes, I'm getting them - -
	CDR	There you go.
	LMP	Pretty good - pretty good bunch of - Want to take this one and I'll hold it over here.
	CDR	... change windows now.
	LMP	Here, you want me to do it?
	CDR	I can do it. Go ahead and ... I can do ...
	LMP	Well, yes. I can't look if you're going to put it in this window. Go ahead. No? Go ahead. Well, show it - show the picture.
	CMP	Okay.
	LMP	You're - yes, but you can't - you're not getting - ... of the terminator.
	CDR	... window.

[redacted]

	CC	Okay, Houston, your.altitude right now is 820 - 835 miles. Over.
	CDR	Okay, 835 miles. And climbing out like a dingbat.
	CMP	Okay, frames 5 through 20 - frames 5 through 20 were taken on mag Papa Papa, at that altitude.
09 18 28 15	CMP	There's Smythii down there. Finally figured out where we are. Right down underneath the window. I can see it now.
	LMP	Gordy, as far as we can, we'll try to run you a little bit - a little bit along the orbital track. I'll be panning the camera more or less westward. Tsiolkovsky starting and Tsiolkovsky is itself in the center Fermi, and moving on to the east, the next big pair of craters that we have spent some time studying is Hilbert, which is just south, is right there, and just a little bit northwest of there is Pasteur.
	CDR	How's the - Ron, if you zoom it, let me know. I have to focus ...
09 18 29 20	LMP	Both Hilbert and Pasteur appear to be very old basins, much older than Tsiolkovsky and they have, as you can see, a fill in them, apparent fill, - very flat looking at this distance and very light colored. It's an event on the Moon of which we have relatively little understanding at this time, but possibly the Apollo 16 results, when they're fully known, through the analysis of the samples and other data, may shed some light on that event.
	CMP	Hey, we are moving up. That's a full circle, now.
09 18 30 08	LMP	Okay, stand by. Now we're going to be able to pan a little bit more east now of Pasteur and start to show you the crater Smythii, the basin Symthii, really. It's one of the older large basins on the Moon. It has none of the obvious features of big basins such as Imbrium or Serenitatis. But it's nevertheless roughly circular, has a mare fill and a very - I'm pointing right now to the hint of a second ring - -

[redacted]

	CDR	There's Tycho, Ron.
	LMP	- - outside, but the main - the main ring is the one Ron's talked to you a lot about. It has his double-ring craters in it - -
	CMP	Hey, ...
	LMP	- - and we're pointing to some of those right now.
09 18 31 00	CDR	Okay, Houston, we can now see Tycho. We're seeing probably about 75 to 80 percent of the entire Moon - face, anyway, lit up. The rays of Tycho are very obvious from here.
	LMP	Want the camera over there, Gene?
	CDR	Let me show it to them, the full thing of that horizon. Give them an idea where - we're looking at.
	SC	Cough.
	LMP	No.
	CDR	No, Gordy.
	LMP	No.
	CDR	No, you won't see Tycho probably - -
	CMP	You won't see Tycho at all, I don't think - Tycho is going to be around on the other side. Which one are you looking at? I can't see which one you're -
	LMP	You can - Langrenus is visible now at the edge of Fecunditatis there, if you want to show that one.
	CDR	Just this side of Fecunditatis?
	LMP	And Humboldt is a crater that ought to show up very well on the television. That's the cracked floor crater there with a little dark mare on it.
09 18 33 09	CMP	There's all the swirls in Marginis. You can really see them now.

[redacted]

LMP Oh, yes. Why don't you get -

CMP Yes. Can you get some of the swirls - -

LMP Okay. Early in our orbit, and particularly Ron, he had a chance to - to work on the question of the light-colored - -

CDR ... by them on the way.

LMP - - swirls and Marginis has outstanding examples of them and I'll try to get the camera pointed on those in the northern part of Marginis. Let me orient you, as soon as we're focused here. Okay. Smythii - I'll point right at the center of Mare Smythii, and then move up towards Neper, and then into the swirled area a little bit more north. And Gene will zoom you in and let you see what some of that looks like. I don't think we have a full answer of what the swirls are, but some of the things that we saw in Taurus-Littrow and later from orbit around Sulpicius Gallus may to suggest to people, from now on, that the possibility of alteration from fluids in the interior of the Moon is more than just a possibility. Can you see the swirls, Gordy? Are the very diffused light-colored areas that cross various topographic features? Okay, I'm going to -

09 18 35 07 LMP Okay, I'm going to give you an end-on view, if I can, of mare - of the Crisium Basin. You should be seeing that now. How is that, Gene?

CDR ... looking at it. ... trying to show them our landing site.

LMP Yes, that's right. And before long, we'll be able to show you the landing site and Taurus-Littrow and I think you probably see Proclus, which is the bright crater just off the horizon now. That's the one with the excluded-ray zone on its western south-western side. It's not in view yet.

09 18 35 44 CMP We may not see that. I think we're going the other way.

[redacted]

LMP Right in the horizon. The landing area, Taurus-Littrow, and the edge of the Serenitatis Basin is probably just on the horizon now and - I'm not sure exactly - -

CMP Hey, you can see the dark part of Serenitatis sticking out of the sea of Proclus - the ray-excluded zone. No, that's Fecunditatis sticking up there, isn't it? Because the ray perpendicular to our track now points right to the landing site right off - off - off of Proclus.

LMP The area where one of the Russian vehicles set down and returned samples from is just about in the center of your field of view now. Just on the north side of Fecutun - Fecunditatis.

09 18 36 46 CDR Wow! That's not a bad climb, is it, Gordy?

LMP A friend of mine says, "Wow woozle!"

CMP Looking out window - window 3 now, and the Moon is just the size of the window, and I've got my face right up against the window.

LMP Or maybe his head is just the size of the Moon. We're not sure which.

CMP (Laughter) That's right.

CDR I don't know what's happening down there now, Gordy, but this is where the action was one time.

LMP Okay, we're starting to, I think - in a little bit be able to show you the edge of the Serenitatis Basin. It's moving a little slowly right now. It looks like it's creeping over the horizon.

CMP It's going to creep over the horizon, maybe, but I think we - -

LMP But I'll tell you what's on the horizon now. I'm not sure I - I can get it. Let me try the rendezvous window. I think I can show them Apollo 11's landing site.

[redacted]

	CDR	Yes, right behind - right - -
	LMP	You probably can get it - the south portion of Tranquillity there, if you - Out the center window would be better.
	CMP	Yes, center window you can get it.
	LMP	See the southern part of Fecunditatis and then the Tranquillitatis takes off to the west there, Gene, right along that southern edge of Fecunditatis is where Apollo 11 set down.
	LMP	Yes, and a little bit north of the line that - of the ray of those two craters.
09 18 38 23	CDR	Could you handle the focus without looking at the ...?
	CDR	That's in focus if you leave it all the way ...
	LMP	Okay, Gordy, the center of your picture is - about right in there, is the edge, southern edge, of Tranquillity and the Apollo 11 area. And that was the ground track, of course, for Apollo 8 and Apollo 10. Yes, we'll put you back on Langrenus, which is one of the Copernican-age craters in this part of the Moon, and I believe it was Apollo 12 had an excellent opportunity for some several orbits to study Langrenus.
09 18 39 54	LMP	Okay, our landing site is in view now, Gene.
	CMP	Over - How about right in there?
	CDR	Okay, I'm pointing at it.
	LMP	You're a little bit off the field - let me move - you're almost out of the field here - let's see. Proclus - Our landing area is just about in the center of your field of view right at the horizon now.
	CDR	... focus ... the zoom, huh?

[redacted]

	LMP	That's the best focus we got, Gene.
	CDR	Zoom it in on them.
	LMP	Okay, full zoom. And right in that region in the center should be the landing site of Apollo 17. Known hereafter, I guess, as the Taurus-Littrow area.
	LMP	Yes. ... There you go.
09 18 41 11	CMP	Oh, man (chuckle). That is really moving out (laughter).
	CDR	I'm sure glad they cleared the traffic out of the way.
	LMP	Let me - Gene, let me switch over briefly and show
		them the North and South Poles, which nobody really has done much with yet except for Lunar Orbiter and some of the Russian vehicles.
	CDR	Why don't you give them a round view of the Moon?
	LMP	There's a spectacular valley off - on the South Pole. I don't know the name. It looks like one of these long chain of - chain of craters. Does that show up, Geno? ...
	CDR	Why don't you take it over there?
	LMP	Let me try it with - -
	CDR	That's the ...
	CMP	... try some of these others.
	LMP	Well -
	CDR	I don't know if you can get it there or not.
	LMP	Oh, here's where I can get it. Okay, Houston, we're in - -
	SC	Good picture.

[redacted]

	LMP	Huh? Good picture? Back in the south polar regions. There's a - I think you can probably see a long chain of craters, which - so far unvisited by man. In fact, the whole region has, and that goes for the North Pole.
	CC	Roger, Jack. That's very interesting.
09 18 43 00	LMP	I think that's the best we've got, Gordy. That's full zoom. It's one of the biggest chater - chain crater valleys that I've seen on the Moon. It - We saw some crossing Mendeleev, in the first few days, I think we talked about, similar in shape but not nearly as big. Let me move over briefly to give you another view of Humboldt, which should show up very well now. We're just about directly overhead. It's unusual - one of the few craters on the Moon that have apparently a flooded floor that appears to have been domed. And - you probably can see some of the cracks in that floor - that have suggested doming to many observers. How's that?
	CDR	Good.
	LMP	Around the edge of the dome floor, you can see some of the dark mare that is prevalent elsewhere in the region but not so abundant within Humboldt.
	SC	Can you - if can see - if you can see - Check it ...
	LMP	Langrenus, you mean?
	CDR	Tsiolkovsky ...
	LMP	Oh, okay.
	CMP	Out the window.
09 18 44 47	LMP	Oh, all right. Hey, there's another view, if you will bear with us, of our old friend Tsiolkovsky. Okay?
	CDR	Okay, I got it.

[redacted]

LMP Yes, it's one of the more pic - picturesque basins, I guess, part - although it's big, it's not so big you can't look at it all at once. Smythii and Crisium and Serenitatis and Imbrium, in particular, are hard to look at all at once. You're always down inside of them in a 60-nautical-mile orbit. One of the -

09 18 45 44 LMP (Laughter) Okay. That's pretty good. I was going to say about 200 kilometers, I think, is what it is, but - -

CMP That's right.

CDR And, Gordy, of course, it's on a - a part of the Moon that you - you don't see from where you are.

LMP Not yet, anyway. Okay. Let's see if we can move on along our orbital track that we've been following and see what's new that's come into view. Once again, I'll pick you up at Smythii - and move you into Mare Marginis, the Margin Sea. And all the mare, you may recall now, we have pretty good evidence as a result of the Apollo - -

CDR Change the ... around.

LMP - - Program - -

CMP Okay.

LMP - - that our theories of basalt flows that some 3 to 4 billion years ago, in round numbers, were erupted on the Moon and filled many of the low areas that existed at that time. Not an awful lot has happened to the Moon since - except for the impact craters - some of the younger ones - since 3 billion years ago, which is one of the reasons it becomes so interesting to man. It's - the Moon is frozen in a period of history 3 billion years and older, which is a period of history that we cannot recognize very readily on Earth because of the dynamic processes of mountain building and oceans and weathering that are taking place even at the present time. Understanding that early history of the Moon may mean an understanding of the early history of the Earth. And I think we're

[redacted]

well on our way to a first-order understanding of that history as a result of the Program. Okay, going to take you a little bit farther along - again to Proclus, which is the obvious partially rayed crater with a big excluded zone to the southwest. There's Mare Fecunditatis and its contact area with the Sea of Serenity, Mare Serenitatis. And the landing site now - has to be just about on the horizon. I think we were a little premature before.

09 18 48 31 CMP Yes, we were. There's Macrobius A and B just beyond Proclus there. Yes, that's really Macrobius.

LMP Now you're starting just to see the - Mare of Serenitatis come over the horizon.

CMP Yes.

LMP And if you take a line from Proclus between the two bright craters - -

CMP You're not going to get more of the Moon unless we - There's space up here.

LMP Yes. Yes. How's that?

CMP Oh, that's good.

LMP Take that line, and that will take you just about to the landing area, right at the edge of the next big mare that you see.

09 18 49 43 CDR The site, Gordo, is now just to the left - left and a little below center of your picture. You can - you can see that region of mountains that sticks out, and the landing site is - well, from here, anyway, right in that area.

LMP Right. I guess my line was a little bit north of where we actually should have pointed you. There's some dark area just showing up and around the edge of Serenitatis on the horizon. I think that will show in your picture as - if I remember some of these from Apollo 10 before. And it's just this side of the dark area that the Taurus-Littrow area sits, in the mountains, there.

[redacted]

LMP Yes, and you also - -

CDR Yes. They should.

CMP Yes. You should.

LMP Vitruvius should be visible to you just to the south of the landing area.

CDR Vitruvius is in the monitor, so they should have it.

09 18 51 08 CDR Jack, I think you've got a good view. You can see Censorinus now. You can probably get a real good shot at the 11 site at Tranquillity.

LMP Yes, you're right.

CDR There's old Censorinus. It's awfully big.

LMP Okay, that's nor - the southern border of - (Laughter).

CDR See, old Censorinus is right in the middle of the screen. You've been there before.

CDR 2000 miles. We've got about a 95-percent full Moon in front of us.

LMP Not too far - matter of fact, I think the Apollo 16 landing area would be just about on the horizon, to the south of Tranquillitatis. And back up to something that's dear and near to our hearts. You probably now can pick out the mountains, the North and South Massif, if you really look closely. What do you think, Gene, from the monitor? Can they see that?

CDR I can't even see the Massifs with the naked eye. No.

LMP See that dark area there, next to ... - -

CDR I know where - Yes. I know where to look, but it's sort of hard to pick them out. But you are looking right at it. You've got it right - just to the left center. It's just about perfect now, the

[redacted]

landing site. There's a little dark area in that peninsula of mountains that sticks out, and the site is just about right in that area.

09 18 53 26 LMP I wish we could show you some of the -

LMP Come on, you guys, I can even see the light mantle.

CDR Extrapolation is the nature of our art.

LMP I wish we could - -

CDR (Laughter) I didn't hear him.

09 18 53 57 LMP Say again. (Laughter)

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03442

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
09 23 55 58	10 00 03 51
10 00 15 54	10 00 21 31

Time good, voice poor.

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[redacted]

09 23 55 58	SC	... go in the bag?
	SC	Yes.
	SC	Okay, up the max ...
	LMP	Are we spinning?
	CMP	Yes.
	CDR	Can you watch this for me?
	LMP	Yes, ... antenna.
	CDR	Can you watch the - right here.
	LMP	Yes.
	CMP	Can you follow it? Don't worry about it if you can't.
	CDR	You didn't have that caution and warning power on?
	CMP	That's right.
	CDR	Why was the caution and warning power on?
	CMP	I don't know. Hope ... maybe it was before.
	SC	...
	CDR	But it won't work this way.
	SC	There it is now, one bulb ...
	CDR	PYRO power should be ARMED.
	CMP	What did we do with those covers?
	SC	... now ... cover.
	SC	Do you want to take these down?
	CMP	... batteries ...
	CDR	Huh?
	CMP	... batteries...

[redacted]

	CDR	(Music) Okay, let's not do any more than we really have to do to until we get ... right there.
	SC	...
	LMP	Sure wish I had one ... camera ...
	SC	... - all of it.
	CMP	I'm sure I ... all of it.
	SC	...
	CMP	Yes. How about that.
10 00 00 46	CDR	All you got to do is go out there and take a few pictures of him and, you know, and then let it float back in there or hand it to me or something.
	LMP	Yes.
	SC	Right on.
	CDR	... What do you got it set on, f/8?
	LMP	f/8.
	CDR	250th. Do you want some orange, Jack?
	LMP	I'll probably take it off. ...
	CMP	That might be - they used to be back over yonder and they might be ...
	CMP	... mag of film ... mag. ... mags put on there?
	CDR	Okay, let's - let's think about Houston.
10 00 02 19	CC	America, Houston. G&C, with his years of experience, thinks that PTC is going to hold. It's looking good so far, and so I think ... to go ahead and configure to go to sleep there ...
	CDR	Okay, we're in the process now, Gordy. Thank you.
	LMP	What did he say?

[redacted]

	SC	..., I guess.
	SC	(Whistling)
	CDR	Okay, I might as well pour me some water, ... well, we want to wash our hands ...
10 00 03 51	CMP	That doesn't seem to matter much though, Gene.

TIME SKIP

[redacted]

10 00 15 54	LMP	That's the way we - ... down here. ...
	CDR	Here it is; I got it.
	CMP	How do you work this?
	SC	... according to ...
	SC	...
	CDR	... are all this way all the time.
	LMP	Okay, the only thing left to do is ...
	CDR	Now I'm going to get out of your way, Ron.
	CMP	...
	CDR	(Laughter) I hope you ...
	CMP	...
	CDR	Well, I'd be satisfed with ...
	CDR	Well, if I'd known you were planning to be there, I would have ...
	SC	...
	SC	Yes.
10 00 19 54	SC	... I ... your big ...
10 00 21 31	SC	... water ...

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03464

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER HSK DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 08 03 34	10 08 03 48
10 08 15 34	10 08 23 51
10 08 36 51	10 08 45 39
10 08 59 21	10 09 06 30

Voice fair; time good.

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[redacted]

10 08 03 34	CMP	Well, here we are, folks, in the old postsleep checklist again. And that takes care of the old postsleep checklist (laughter).
10 08 03 48	LMP	Bob, we can't quite see Tsiolkovsky any more. I can't make it out. That's probably just about it now. ... anyway, but we've come around to the side where we've got Copernicus well inside the horizon. And can look down at ...

TIME SKIP

[redacted]

10 08 15 34	CMP	Think I'll go in and light a cigarette tonight.
	SC	Okay.
10 08 15 44	CMP	No. I'll have to go through it by myself, you know.
	SC	March around ...
	SC	...
	CMP	Before I have something to do.
	SC	We're through.
	CMP	No, I was just wondering ...
	LMP	Turn it over.
	CMP	I finally decided ...
	LMP	Well, are you going to start smoking again or are you going to - -
	CMP	No, I don't think so, Jack. I'm going to quit.
	LMP	You going to quit? It'll take a lot of courage and fortitude.
	CMP	Yes.
	LMP	People around you are smoking theirs.
	CMP	... stop from smoking because he smokes as much as anybody I know.
	SC	Yes.
	LMP	Did he get scared?
	CMP	Yes, he got scared.
	SC	...
	SC	Yes. That's the whole point.
	CMP	I was up to - oh, two packs a day. I - I never went beyond two packs a day. But - every once in a while, I hit two packs. It got so it was very seldom just one.

[redacted]

10 08 17 21	LMP	That's lots of cigarettes.
	SC	Small thing ...
	SC	...
	SC	...
	CMP	Yes (laughter). ... that's true. No. ...
	SC	...
	CDR	You feel like eating?
	CMP	I do.
	CDR	I bet you they asked for one.
	LMP	If you're not feeling right ...
	CMP	No, I feel great. I really do.
	CDR	I bet you they ask for one.
	LMP	Think about us ...
	CMP	Yes, we've - That's why I said we ...
	CDR	Sure is a dull SIM. (Laughter)
	SC	...
10 08 18 46	CDR	You know, I'm surprised that I'm not as spacely disoriented when I wake up in PTC as I was in lunar orbit. I don't know how you explain that one.
	LMP	I find that I can sleep ...
	CDR	I don't know.
	CDR	Ron, if you want to heat up the hot water - -
	CMP	I've already heated it.
	CDR	Oh, it's all ready. Okay.

[redacted]

	CMP	Unless you want it ...
	CDR	No, that's all right.
10 08 19 33	CMP	Good water?
	SC	I think so.
	SC	...
	CDR	(Laughter) We're generally dumping down to something again today.
	CMP	Yes.
10 08 20 02	LMP	Bob, is your EECOM friend going to let us practice the waste water dump again today?
	CC	I kind of expect so. Stand by, and let me find out for sure. Roger, Jack. There's one coming up at 252:50, about 2 hours from now.
	LMP	Okay. We'll start reviewing that one. We'll be ready for him this time.
	CC	We won't let you sneak behind the Moon on this one.
	LMP	(Laughter)
	LMP	(Singing) What did we do with the Flight Plan? That - That was ...
	CMP	Yes.
	CDR	Zero. Whew! It's cold in here.
	SC	...
	CDR	I woke up because I was cold.
	LMP	I want some coffee.
	CMP	I'll get some.
	CDR	Huh?
	CDR	How about some cocoa?

[redacted]

	CMP	(Laughter) Want some cocoa?
10 08 23 51	LMP	Very good.

TIME SKIP

[redacted]

10 08 36 51	CC	We don't - Would you clarify that request?
	MS	(Laughter)
	LMP	... on the heater.
	LMP	Well, we've been getting a lot of complaining.
	CMP	Very good. ...
	CDR	Tell them about my - my - my back bottom side heater.
	LMP	Where are the - -
	CC	Jack, you might use reel 2 if you want to. It's about the only thing we can think of.
	MS	(Laughter)
	LMP	Reel 2. Yes, you get the idea.
10 08 37 38	LMP	Anyway, it's cold. It's not really that bad, Bob, but we're hearing a lot about it.
	CC	Okay. Well, we'll work it out here, if we can try.
	LMP	Well, you might discuss it with SPAN.
10 08 38 06	CDR	I like not to - like not to waste reel 2. It's got some other good uses.
	CDR	Hey, where are the darn adhesives?
	CMP	They're in the ...
	CDR	I know they're in here. I just can't find - -
	CMP	...
	CDR	They're in the bag?
	CMP	...
	CDR	I thought it was ... There they are.
	CMP	Anything I can ...

[redacted]

	CDR	(Laughter) Where's ...
	LMP	Didn't sound very good to me either.
	CMP	... Gene, I guess ...
	CDR	That's not a gosh darn problem. Nobody ever got that idea across.
10 08 39 04	LMP	How do you feel, Ron? Are you tired again?
	CMP	Yes.
	LMP	Still do, huh?
	CDR	If you do, take a couple of those ... like they tell you.
	LMP	You might as well throw a Seconal in on top of them (laughter). You know, if it worked once, it might work again.
	CMP	...
	LMP	Yes. And you got any comparison about traveling to ...
	CMP	If I hold my stomach ... inside and make - make it a cabin ...
	MS	(Laughter)
	SC	It's closed.
10 08 39 55	LMP	I think I got grits this morning. That's good. I was wondering what I might have in here that tastes different. Grits will taste different.
	CMP	They sure will. I'll go along with that.
	SC	...
	CMP	It's starting to ...
	CDR	Gee, I thought charcoal was a laxative. Isn't charcoal a laxative?

[redacted]

	LMP	That's all you need is a Coke.
	CDR	One of them was ba - Baby Ruth.
	CDR	You're greedy.
	LMP	I don't want it.
	LMP	I had been doing all the ...
	CDR	It's cocoa. I love cocoa normally, but I tell you, this flight has just made me - really made my stomach bad, I think. Something has. I'll just blame it on cocoa.
10 08 41 44	LMP	You ought to put that on the wall.
	CMP	Yes. ...
	LMP	Now, who the heck can eat with three coffee bags and everything else laying around?
	CMP	Nobody.
	LMP	That seems to be the most popular song on the tapes.
	CDR	I never had to - I just turned it around and it - -
	LMP	No, I know. But it's coming to repeating itself on various tapes.
	SC	Put another Simon and Garfunkel on.
	CDR	Ron, I want to take out a can of fruit down there somewhere rather than eat this. Must be a can of fruit around somewhere.
	CMP	I don't have any ... You want a can of fruit?
	CDR	Yes. I want a can of fruit.
	LMP	Yes. I won't bother you any more. The grits and ... is going.
	CDR	What's going in?
	SC	(Singing)

[redacted]

10 08 43 57	LMP	Here's the catsup going in.
	CMP	... something the other day we ate at dinner.
	CDR	Maybe cocoa would be better if it was hot.
	CMP	Huh? Yes.
	CDR	Maybe I'll try it.
	CMP	Don't look for those ... Here's some more.
	CDR	I don't want any more, Ron.
	SC	... taking it.
	CDR	Get that trash out of there.
	LMP	Yes. We want to get rid of everything we can today; otherwise, we take it all home.
	CDR	...
	LMP	Yes.
	CMP	I'll bring you some hot water.
	CDR	Hey, Ron, not hot water I - -
	SC	...
	LMP	He's not ... cause he's not supposed to.
10 08 45 39	LMP	Put more in there, and I'll be out of your hair.

TIME SKIP

[redacted]

10 08 59 21	CDR	I prefer not to give you a GO for EVA, Ron, until you get your sensors ...
	CDR	Good old Challenger. I don't care that - that bird has absolutely nothing wrong with it. You can't even count that regulator. The worse thing that we had with that was probably a transducer shift.
	LMP	That was it, huh?
	CDR	One of the command regulators had a slight leak by it, but it even reset itself there once.
	LMP	Yes. A pretty brief anomaly reported on the LM.
10 09 00 37	CDR	The radar - landing radar was absolutely superb!
	LMP	Did it lock on good to start with?
	CDR	It locked on. It locked out before it normally would have yawed at 70 degrees out. And when you yaw back in, you put the radar to the point on the ...
	LMP	Yes.
	CDR	I think it yawed more than 20 degrees. Only at 70, she - she - the light started - Well, before I yawed, the caution light started blinking. So I just yawed about 70, and the light started blinking and went off. Boy, they sure picked up that - that high point of 30 000 feet. I don't know if you're watching, Jack.
10 09 01 11	CDR	Oh course, you might have had that one locked in.
	CDR	The rendezvous radar, Ron, was absolutely superb. Absolutely superb!
	LMP	I guess that VHF locked on right after insertion. You guys shut down on insertion.
	CDR	I was going ... ... insertion shut down, and it locked on, just like that.
	LMP	I got to ... recycle your tone.
	CDR	Yes.

[redacted]

LMP That tone was beautiful. Just like in the - -

CDR Schedule?

LMP - - in the chamber over there in Houston. As soon as you got that thing - beep, whoo, whoo. That's weird.

CDR Well, when old Tom and I were talking about that, when we first heard it, you know when that - that ... at that time. Tom and I were talking about it, and we - you know, we forgot we were on hot mike to John, and John said - after a long silence, he said, "Hey, you guys hear that too." (Laughter) And he was just ...

LMP I was going to turn it on, and I really didn't have time to do that.

SC I forgot about ...

CMP (Laughter) Oh, yes. I didn't hear it.

SC ...

CMP Yes.

SC ...

CMP Put one of those Simon and Garfunkel tapes on.

10 09 03 17 LMP Simon and Garfunkel. Okay.

LMP (Laughter) Are you sure? Would you like to try again?

CC Well, that's all right, Jack. We'll live with it for a while. We're looking at - no need to acknowledge this - we're looking at your temperature problem. And there's a couple of obvious things I'm sure you've undertaken, but if you haven't - all the window shades off. Get some sunlight in there. And might crank on all the lights to get some more heat load in there. Also the - of course, the cabin fan and the temperature - CABIN TEMP control thumbwheel - It's your option on that. The other things, like mixing valve adjustment and powering up other items, we're looking at very

[redacted]

seriously, but we would like to not do those items until after the EVA this morning. We'd like to remain the status quo on the ECS system with the exception of - You do have the cabin fans on your option there. But we would like to re - retain the rest of it status quo until after the EVA.

LMP Well, thank you for all your research in there, Bob. I'll let the commander make the decisions. It - it's his thermostat.

CC Roger.

CMP The CMP feels pretty good so - -

CDR I'll see if they can get me mad this morning. That'll warm things up. Temperature's on the way up.

CC Roger. Trying to get reel 2 up to you, if you want.

CDR Pardon?

10 09 05 18 LMP He offered reel 2 again.

CC Said I'll bring reel 2 up to you, if I can get there.

CDR Well, reel 2 will sure be an imaginative start when you consider all I've got is Ron and Jack.

CMP It is going to be very interesting to see what reel 2 is.

MS (Laughter)

LMP You given some of these.

CDR I hope we have.

CMP Sort of be interested in the ... and the ... in 109, too.

CMP I hope old Bill Cole heard that. (Cough)

[redacted]

	LMP	You'll like him when you meet him, Ron. He's a super guy. He's a sharp guy, a very sharp guy.
10 09 06 30	CDR	Yes.

# # #

[redacted]

(This page Unclassified)

Tape 17-03455

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 21 19 04	10 21 24 19
10 21 24 34	10 21 28 58
10 21 29 34	10 21 29 41
10 21 39 00	10 21 48 54
10 22 08 12	10 22 08 19
10 22 35 52	10 22 46 32

Time, good; voice, okay.

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GROUP 4
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[redacted]

10 21 19 04	CMP	Huh?
	CDR	Hold on ...
	CMP	Okay. I thought you were through. ...
	SC	Those are the ... this thing here.
	SC	(Music)
	LMP	Huh?
	CMP	Let's see ...
	CDR	There's our tissue.
	SC	Spread them out.
	CDR	You want a - you got a bag for the command module stuff or what?
	SC	No, ...
	LMP	Ron, will this stuff fit?
	CDR	If I could ... two hands ... and a ...
10 21 21 54	LMP	... they fit in there? Are you coming? ...
	CDR	... the legs of the ... and leave them here for?
	CMP	... what?
	CDR	Why did you leave the legs of the ... here?
	LMP	Camera stand.
	CDR	... legs of the ...
	CMP	Oh, I thought I might be able arrange the thing so that you can see through it. ... be the judge of ... antenna. You got to be down between ... your camera.
	CDR	You got a place to stow those things? ...
	CMP	No, I'll - -

[redacted]

	CDR	I can put - -
	LMP	...
10 21 24 19	CDR	Where was that bag? I saw it there.

TIME SKIP

[redacted]

10 21 24 34	CDR	Will that fit in A-7?
	LMP	... at the window ... It's right ...
	CMP	...
	LMP	... to look at that?
	LMP	What are you going to do, Ron? You going to find a bag for your stuff?
	CMP	Yes, somehow.
	LMP	Why don't we stick this - stuff this camera in there, too.
	CMP	Don't know what ... jettison bags ...
	CDR	Yes, I was just trying to make - those jettison bags are easy to fold up. But they're hard to stow ...
	CMP	Yes, that's right.
	CDR	Well, we'll find another bag. We'll put whatever else - command module and - stuff the camera ... and I'll - wait a minute check those - maybe I got a bag in here. Here's a sanitation supply bag.
	CMP	Here's the tape. ...
	CMP	Put that in there.
	CDR	We'd like to get those cables - -
	CMP	... anything else I can do.
10 21 27 00	LMP	Temporarily we'll put it in there to protect it ... we hang it up.
	CDR	... the cable.
	LMP	What cable?
	CDR	Will they fit in there? ... maybe we can just ...
	CMP	Well, I don't know ...

[redacted]

	LMP	Is that all you have? Sort of a LM return item, isn't it?
	CDR	It is a LM return item.
	LMP	Where are they?
	CDR	... up there.
	LMP	Yes, I'll get to it.
	LMP	Normally it would have been jettisoned, right?
	CMP	...
	CDR	... What is it?
	CMP	What?
	LMP	These are LM-CM umbilicals ...
	CMP	...
	CDR	... down here.
	LMP	See anything else, Ron? That would be considered jettisonable?
10 21 28 58	CMP	Huh? ...

TIME SKIP

[redacted]

10 21 29 34	CMP	What did you do with the two ... two handles ...?
	LMP	They're back in that TSB, I think.
	CMP	...
10 21 29 41	LMP	Weren't they?

TIME SKIP

[redacted]

10 21 39 00	LMP	Yes, just wondering how the high gain is working out for you.
	LMP	Okay.
	CDR	... 20 ... A-4, 22-B ...
10 21 39 47	CMP	Well, I need some exercise, ... exercise. Well, - ... Hey, I got to do a P52.
	LMP	Huh?
	CMP	I got to do a P52 pretty soon. Where are we? 264:20.
	LMP	The next ... do it this PTC ... next ... we're going to sleep in.
	CMP	All right. They are, aren't they?
	LMP	How are you going to fix those?
	CDR	Yes, ...
	CMP	Boy, everything's great. ...
	LMP	... the one that's probably cutting in and out now.
	CC	Jack, Houston. Over.
	LMP	Go ahead.
	CC	The high gain is holding on there, but we think we can improve our - the time we can hold on to narrow beam width a little bit if you'd tweak it to PITCH, plus 15, and YAW, plus 185, please.
	CDR	B is getting to be a bear, isn't it? ...
	LMP	Plus 15, you said, Gordy? Gordy, you said plus 15?
	CC	Plus 15 and a plus 185.
10 21 42 03	LMP	Okay.
	LMP	Ron, darn you. Gee!
	CMP	... (Laughter) get another ...

[redacted]

CDR ... another moment, though.

CMP ... (Laughter) Yes.

CDR Are these things supposed to go there? ...

LMP No, it's not bad at all. There's only one strap on them, as a matter of fact.

CDR ... Huh?

LMP I don't know ... because they'll have to be strapped on top of it, top A - top A-1 and top of A-2. So you got to restrap them.

CMP There's two broken wires. I think the other one's about ready to break.

LMP Gordy, the canister's changed.

CC Thank you.

LMP Yes, ... starting to cut out completely on me, for reception.

CMP One of those may be on - may be down there on - some other ones may be ...

SC ... pressure on it.

LMP No, there it is. About 5 o'clock - 5 o'clock central standard.

CMP Five o'clock tomorrow afternoon ...

CDR For the press conference?

CMP Yes.

LMP ... 30 minutes. No, ... in an hour. No, 30 minutes ... scale.

10 21 46 46 CDR I'm going to give this guy one more chance. I hope he's better on the other side.

CMP Do you read me? 1, 2, 3.

[redacted]

	LMP	Yes, you're coming through loud and clear. Do you read me?
	CMP	1, 2, 3; 1, 2, 3.
	LMP	Yes. Do you read me? 1, 2, 3; 1, 2, 3. Do you read me? 1, 2, 3; 1, 2, 3. Do you read me? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 1, 2.
	CMP	Yes ... something stuck down there ...
	CDR	Yes ...
	LMP	Both ears. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. And a 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. 1, 2. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 1, 2.
	CMP	It's not cutting out now, but ... just sick.
	LMP	That's all right. Whatever it is - -
	CDR	Yes, we don't - -
	CMP	Still ...
	CDR	Yes -
	CMP	Okay, we're in good shape.
	CDR	I guess you're looking at the orange light too, huh?
	CMP	Getting ... Those were my ... (Laughter) Yes. That's all right. If it goes - if it goes into gimbal.
	CMP	No. Are we seeing - no, we're PTCing now, with no jets, huh?
	CDR	...
	CMP	Oh.
10 21 48 54	CMP	No, it's on ... You're right.

TIME SKIP

[redacted]

10 22 08 12	CDR	P52 any time you want.
10 22 08 19	CMP	Okay.

TIME SKIP

[redacted]

10 22 35 52	LMP	Covers open and closed.
	CDR	Jack, ... they'll cue you on that.
	CMP	...
	LMP	Houston, I doubt if it's a problem, but UV COVER's still OPEN.
	CC	Roger, Jack.
	CMP	(Singing) I think we just ... zap it and it'll be right.
	CDR	I think it will. I think VERB 40 will take it, too. I wouldn't be surprised if I did load 20.
	CMP	(Laughter)
	CDR	Called up 20.
	CMP	Yes.
	CDR	Called up 20 ...
	CMP	... VERB 40 in this spacecraft. That's right; go ahead. It'll work.
	CMP	Looks about right.
	CMP	Call it again.
	CDR	Yes, ... come back and ...
10 22 36 58	CDR	Looks good, Gordy. Matches the ball.
	CC	Roger. We see that. We're getting high bit rate now, by the way, also.
	CDR	I don't know. You can track it down, but I called up NOUN 20 to check the roll angles, and it was not what we were using in the book here, of 14 degrees. And I very easily could have - could have loaded 20 instead of 22, which I would feel a lot better about if that were the case.
	CC	Okay. We'll sure track that one down.

[redacted]

	CMP	(Laughter) Beautiful. How about a cup of coffee?
	CDR	A cup of tea.
	CMP	A cup of tea?
	CDR	It's about eating time.
10 22 37 41	CMP	Is it? Oh, it's time to eat, huh?
	LMP	I don't want anything to eat.
	CMP	Oh, okay.
	LMP	Something to nibble on, maybe.
	CDR	No more nuts in there?
	CMP	Nuts are all gone. Nuts are all gone. But we may have some - Yes, I'd feel a lot better if that's what happened.
	CDR	I - The more I think about it, Ron, the more I think - -
	CMP	Yes, it's funny, I wasn't paying any attention to what you were loading there.
	CDR	Oh, if I had loaded 20 I wouldn't either. I called 20 to check the roll angle so I could reload it.
10 22 38 18	CMP	Yes, I kind of screwed you up, too. I was asking you questions about - you know, where we're going what we're doing - distracting you from - -
	CDR	No, that's not ... - -
	LMP	I figured ... running against the LEB.
	CMP	(Laughter)
	CDR	Doesn't make any difference what the case was. I hope I loaded 20.
	CMP	Yes, me too.
	CDR	I wasn't going to suggest that.

[redacted]

	CMP	(Laughter)
	CDR	That sure takes away all the im - impact I had about that P52 though.
	LMP	Are you there?
	CDR	No, we have 90 ... to go.
	CDR	That'll wake them up down there in the MOCR.
	CMP	Yes. (Laughter) Yes, that's right. Did you say you wanted a new jug?
	CDR	Yes.
	CMP	I think we owe it to ourselves. We better have a new jug.
10 22 39 12	LMP	I've already thrown my old one away. I'm glad you mentioned it. But I sort of quit drinking water, though. I've just been drinking these juices.
	CMP	That's probably a good idea.
	LMP	I don't like the water. I'd rather - I can take the gas ... it's easier - You know, it's like drinking bad water. You know, like in Houston. You can - -
	CMP	Yes.
	LMP	- - you can drink the chlorinated water if you can mix it with something.
	CDR	You got another omni for them there?
	LMP	Like booze.
	CMP	Oh, I'm sorry.
	CMP	Hey - I think they should be able to figure that out. Maybe, I don't know. Let's see how much the glitch was, you know, when they rezero them and where we were. What a measurement ...

[redacted]

	CC	America, we're ready now for you to proceed on per Flight Plan with the VERB 49 to the sleep PTC attitude. We have not had a chance to go back over the data, but we'll give you a call as soon as we get a chance to check it. Over.
10 22 40 51	CDR	Okay, Gordy. One other interesting thing while we went back and looked at NOUN 22 after the glitch. We still had the NOUN 22 angles I had loaded for the previous VERB 49 at 263:40, which either - even makes me feel more like I did not load 22 on this next time around.
	LMP	Have an EMP ... for the commander.
	CMP	(Laughter) Yes, that's right.
	CC	Yes, it sounds - it sounds like we might have the problems nailed down, but we'll doublecheck that.
	CMP	You got a - ... Here's one in here.
	CDR	This is a gross admission, if that's the case; but I'd rather have it that way.
	CC	We won't hold it against you.
	LMP	I was half asleep, but not anymore.
	CMP	That's right.
	MS	(Laughter)
	CMP	That's right.
	LMP	(Laughter) ... call it up ...
	CC	America, Houston. Why don't you hold the PRO on - on this VERB 49 until we have a chance to check and see if we're going to have a gimbal lock problem.
	CDR	Okay.
10 22 42 46	CDR	Gordy, can I use the roll we got, 142?
	CMP	... That's what I asked Jack and see if - going to have run into gimbal lock when you go from there to - to the other one.

[redacted]

	CDR	I'll stand by until you check that gimbal lock out.
	CMP	What did I do with that thing. Throw it away?
	CC	Stand by. We're checking that.
	CMP	What do you need?
	CDR	...
	CC	Your answer is negative, Geno. The present roll - the maneuver should - shows on our computer, you'll go to gimbal lock. So suggest you go to 14 and then start to maneuver ... Over.
	CDR	Okay.
	LMP	... that hydrogen separator failed. I just don't think it separated ...
	CDR	That's right.
	LMP	See that's ...
	CDR	... water in there and the hydrogen separator conversion failed and all the other stuff ...
	CMP	What the heck. What do I do if the separator failed?
	LMP	Yes. ... said it failed?
	CDR	...
	LMP	Yes, I heard that.
	LMP	... expert on hydrogen separation. I just don't think it's ever been particularly successful.
10 22 44 28	CMP	Oh, no, it never has.
	LMP	You guys didn't have one, did you? You resulted in it.
	CMP	Yes, you're the ones it started with.
	CDR	Did we?

[redacted]

LMP ... started the complaining.

CMP Yes.

LMP Did you have the same bloated feeling on 10?

CDR We felt - we felt a lot of water, a lot of gas and water.

LMP ...

CDR We never had to take -

CMP Well, you don't like the food. Heck, that's ... data points - -

CDR I never had to take three bites ... I never had to take any pills or anything like that.

LMP How did the food on 10 differ from what we've been eating?

CDR I don't know ... I don't know what we've been using ...

CDR ... on 15 and 16, huh? That's a lot of ...

CMP ... diet ...

10 22 45 19 CDR You have a piece of Velcro laying around?

CMP What kind of Velcro?

CDR Something I can put right here ...

LMP What do you want? Pile or hook?

CDR What do I need to ... Hook, I guess.

LMP Pile.

CDR I don't know ... put it on here.

LMP Oh, yes, you want a hook.

CMP I just took it off of my food package.

LMP Here.

[redacted]

	CMP	You need a red one ...
	CDR	Why? Are you going to check your outs ...?
	CMP	Yes. Mine's out ... It's got a blue - -
	CDR	... I'll get a red one.
	LMP	What have you got to nibble on? You know - sweet? Got any crackers?
	CMP	Yes. There's some graham crackers in there.
	LMP	No, there aren't. Those are cubes.
	CMP	Well, ... sort of ...
	LMP	... What are we having, wet packs for dinner?
	CMP	Yes.
	LMP	I'd eat a wet pack.
10 22 46 32	CMP	Well - -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03461

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 22 50 28	10 22 50 28

Time and voice good.

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Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

10 22 50 28 LMP Works every time, doesn't it?

# # #

[redacted]

(This page Unclassified)

Tape 17-03459

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER HSK DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 17 27 24	10 17 27 40
10 22 45 29	10 22 46 49
10 22 50 01	10 22 50 26
11 00 38 47	11 00 38 52
11 00 58 06	11 00 59 02

Voice fair; time good.

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[redacted]

10 17 27 24	CDR	Give me that thing off of there will you, Ron?
10 17 27 40	CMP	Yes.

TIME SKIP

[redacted]

10 22 45 29	CDR	... spacecraft.
	LMP	Okay; good.
	CDR	Smile.
	LMP	You know - -
	CDR	You need that kind of stuff.
	LMP	... don't want to ... Put it down here.
	CDR	Oh yes, you want ...
	CMP	I just took if off my food package.
	CDR	Here.
	CMP	You need a red one though, right?
	CDR	Why, you got to take yours out?
	CMP	Yes, mine's out ... lunar ...
	CDR	...
	CDR	What have you got to nibble on? No - sweet. You got any crackers?
	CMP	Yes, there's some graham crackers in there.
	CDR	No, there aren't; those are cubes.
	CMP	Well, all right.
	CDR	... what do we have, wetpacks for dinner?
	CMP	Yes. I'd eat a wetpack.
	CMP	Well, ...
	CMP	Well, why don't we just start eating dinner?
	CDR	Is it that time of day?
10 22 46 49	CMP	Matter of fact; it is.

TIME SKIP

[redacted]

10 22 50 01	CMP	(Laughter)
	CDR	Wise - wise guy.
10 22 50 26	CDR	Works every time, doesn't it?

TIME SKIP

[redacted]

11 00 38 47	CMP	I don't know. ...
	CDR	... does.
11 00 38 52	LMP	Hey.

TIME SKIP

[redacted]

11 00 58 06	CMP	No. If that changes, this has got to change.
	CDR	Yes.
	CMP	The BD or AC.
	CDR	... any other place.
	CMP	Well, yes. That's right; B-1, or B-2 - B-1.
	CDR	Can't really stow that big box of wrenches until we go to sleep tomorrow, after we wake up the next day.
	CMP	...
11 00 59 02	CMP	We always used the ...

# # #

[redacted]

(This page Unclassified)

Tape 17-03449

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 23 36 40	10 23 44 14
10 23 48 03	10 23 56 14
11 00 14 10	11 00 21 01
11 00 35 30	11 00 39 54
11 00 53 07	11 00 59 03
11 01 29 25	11 01 36 55

Time good, voice fair to good.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

10 23 36 40	CDR	I don't know that I would have if I had to take that Seconal as much as I hate to admit it. I have about decided though that my particular discomfort of wake - waking up is characteristic of the environment and not of Seconal. Because I - the nights I didn't take any and I got to sleep and then woke up, I felt the same defocus of most of my senses, partic - sight, for one thing, and hard to bring it in and just general - awareness of some kind of disorientation.
10 23 37 32	LMP	6:30.
	CDR	You mean I have to keep eating?
	CMP	(Chuckle)
	LMP	Pre-sleep checklist. No film mags required for the next day.
	CDR	Huh? We got some.
	CMP	Yes, we've got to get that - that Nikon's got a whole ... take ...
10 23 38 00	CDR	Well, take all those nice little shots you like to have with me shaving or having ...
	CMP	We could do that one of your - your changing ...
	CDR	(Laughter) Yes, changing my ... That's right. Changing my feeling of well-being, too (laughter).
	LMP	How about a bath, a change of clothes and everything?
	LMP	How about a bath and a change of clothes?
	CMP	Yes, I could ...
	LMP	I've got to turn right around tomorrow and put those sensors on again.
	CDR	Yes, I'm not going to bother taking mine off, I don't think.
	CMP	Well, I put them on, I guess, for entry.

[redacted]

	LMP	Yes, even I might be interested in your heart rate during entry (laughter).
	CMP	Yes. Ohhh.
10 23 39 20	LMP	Old EMS has been looking pretty good, huh?
	CDR	Except when ...
	LMP	No. That - -
	CMP	... anything with them.
	CDR	...
	LMP	Very - -
	CDR	... has gotten better.
	CMP	Yes.
	LMP	Erratic though, isn't it?
	CDR	No.
	CMP	... to within 0.2 of a foot per second.
10 23 40 32	LMP	I think you got the window dirty when you were out there.
	CDR	Someone's going to have to go wash it.
	LMP	Ohhh.
	LMP	Can't get much fuller.
10 23 42 03	CMP	The UV's on now, huh?
	CDR	Oh, I don't know.
	LMP	Yes, but the cover's closed on the IR.
	CMP	Oh, the cover's closed again.
	CDR	I'll put the optics ... for you.
	CMP	...

[redacted]

	CDR	See anything up there worthwhile?
	LMP	You could on the Moon at night, couldn't you?
	CDR	Oh, yes.
	SC	...
	LMP	Tomorrow's the first real nothing day we've got, you know that?
	CDR	...
	CMP	(Laughter) You're right.
	CDR	I'll bet ... fall off during ... and I'm going to -
	CMP	That's going to be a regular PTC attitude.
10 23 44 09	LMP	It's UV stellar attitude.
10 23 44 14	CMP	...

TIME SKIP

[redacted]

10 23 48 03	CMP	I'm going to take that medicine.
	CDR	Did you notice how those lines moved around at 1/6 g? ... the Rover lines.
	LMP	...
	CDR	Was it ... lines? This is more random than that was - -
	CMP	Yes.
	CDR	- - with those Rover lines and step lines. I ... them to ... one time... tell the difference. Oooh - all the way down at the end of the Rover in some of the Rover lines.
	LMP	Thank you, Ron.
	CDR	This is just random in zero g. Look what you just did.
	LMP	Well, a vi - a vi - -
	CDR	I hit my hand again.
10 23 49 30	LMP	That's one of the - that's what your gravimeter was with the vibrating - strain - gravimeter - frequency of vibration being a measure of the gravitational field.
	CC	They're looking forward to seeing you tomorrow on the press conference and back on Earth shortly thereafter. I got one from Nassau Bay, too, if the commander's listening.
10 23 52 41	CMP	You want to listen?
	CDR	He's listening.
	CC	Okay, Gene. Your mother and family have arrived. They - in fact, they just walked in from a party with Barbara. They all wish you to hurry home and send their love. Over.
	CDR	Very good, Gordy. And I return mine.

[redacted]

	CMP	You lost him.
10 23 56 14	LMP	Check the EMERGENCY CABIN PRESS to BOTH there, Gene, please.

TIME SKIP

[redacted]

11 00 14 10		(Music)
11 00 16 53	CDR	Yes, we ought to get that ...
11 00 17 15	CDR	Thought you could get that over here.
11 00 18 16	CC	America, Houston. I'll turn you over to the crew astrologer here. Pleasant dreams.
11 00 18 23	LMP	Thank you, Gordy. And we enjoyed the day with you. See you tomorrow.
11 00 18 43	LMP	Well, so much for that handover.
11 00 18 56	CMP	... over and unplug it.
	LMP	(Chuckle)
11 00 19 07	LMP	Haven't you learned better than to unplug with an interval between?
11 00 20 07	LMP	Our old panel 2 MASTER ALARM glitch is gone.
	CMP	...
	CDR	Do you ...
	LMP	No.
	CDR	No?
	LMP	No, I haven't seen any. Have you? Do you have any?
	CMP	... 4 hours. ...
	CDR	... anything else I can have. Do you have any?
	LMP	Well, there also seemed to be a little bit of correlation when we were pumping up - pumping up the cabin or had a high pressure in the cabin.
	CMP	...
11 00 21 01	LMP	Yes. I got it on the Flight Plan before we go to sleep.

TIME SKIP

[redacted]

11 00 35 30	LMP	Excuse me, Gene.
11 00 35 55	CDR	... fine ... Muscles ... go down and never have to go up ...
	LMP	Muscles probably are extending you.
11 00 36 21	LMP	Houston, we're going to turn the cabin fan off for a while. It's off. Sorry, it's already off. It's off.
	CC	Okay; we copy. Cabin fan is already off.
	LMP	That's right. They're - I - I think they're ... things around ...
	CDR	Wish you'd turn it on.
	LMP	Oh, I thought you said off.
	CDR	No, I want you to turn it on.
	LMP	Oh, I'm sorry. Turns out the request was to turn it on, so we will.
	CC	Okay, understand you're going to turn the cabin fan on. ... - -
11 00 36 54	LMP	MARK it. MARK it.
11 00 38 30	CC	America, Houston. We'd like to talk to Captain America, please.
	LMP	Give him about 5 or 10 minutes and he'll be with you. They - -
	CC	Okay; have him call us when he gets ready.
	LMP	Okay. They - For some reason they want to talk to you, Ron.
	CMP	Who wants to talk to me?
	LMP	I don't know. Parker does.
	CMP	...?
	LMP	They.

 [redacted]

11 00 39 43	CMP	Houston. This is the command module pilot. Go ahead.
	SC	...
11 00 39 54	CMP	Oh, we went out of contact?

TIME SKIP

[redacted]

11 00 53 07	CMP	Well, I wonder if I can get by without any Afrin tonight. I think I'll try it and see. ... better ... I hate to use that too much because it gets so it won't do any good. And I'd kind of like to make sure I have some for entry.
	CMP	(Cough) I wonder what we have for decongestant.
	CDR	...
	CMP	...
	CDR	Well, let's see, we got to chlorinate and we got to pump up the cabin.
	CMP	And clean the screen.
	CDR	... screen and I'll take the chlorinate. How's that?
	CMP	Okay.
	CMP	... got it?
11 00 55 40	LMP	Man, I'll take those Lomotils before I - before ... - I said, if I try to get it, I'll take a Lomotil, you know?
	CMP	Trouble is, you don't know it.
	CMP	You don't? No, that's the ... But I defecated. I didn't have the slightest idea until I defecated.
	CMP	Is there ... in the water?
	CMP	The thing just floats around, though.
	LMP	Been here all day.
	CMP	Oh, yes, yes. Yes, I got ...
	CDR	Get up at 8 o'clock guys.
	CMP	8 o'clock, huh? Well, set my watch.
	CMP	Any of these ...?

[redacted]

	CDR	Anywhere ... these jets. We're always going to use ..., okay? Ignore these ...
	CMP	In quad D, huh?
	CDR	Even the ... See all these ... are ... changed them all. See, like here? B-1, B-2, A-3 ... jets here ... stop it. ... and all that ... you know? ... change.
	CMP	Yes. Well, if that changes, this has got to change.
	CDR	Yes.
	CMP	... and BD are - AC - -
	CDR	... other way.
	CMP	Well, yes. That's right; B-1 and B-2; B-1.
11 00 58 45	CDR	Can't really stow the big box ... until we go to sleep tomorrow after we wake up the next day.
	CMP	The ... back down here?
11 00 59 03	LMP	... really just a tiedown job is all.

TIME SKIP

[redacted]

11 01 29 25	CMP	- - ... unhooked (chuckle).
	CDR	Huh?
	LMP	They were stuck right there. Well, whose are these? These got a dosimeter in them.
	CMP	Those are mine. I need to get the dosimeter out (laughter).
	LMP	Well, where - are these mine?
	CMP	Yes.
	LMP	These are mine?
	CMP	Yes.
	LMP	Okay.
	CMP	I think so. ..., isn't it?
	LMP	I didn't tie them up, Ron. You must have tied them up.
	CMP	I tied them up.
	LMP	Okay. Well, hey - -
	CDR	...
	LMP	- - hey - hey.
	CMP	(Laughter)
	LMP	No more feces in this trailer.
	CMP	(Laughter) No more feces.
	LMP	Ron - Ron, ... to defecate. It's my turn next so I got to hold my breath longest.
	CMP	You do? (Laughter)
11 01 30 18	LMP	Well, I'm not going to - I'm not going to - I'm not going to put these in there tonight. I can't get - -

[redacted]

	CMP	Oh, heck, no. ...
	CMP	...
	CDR	Can you get at that OPS? They want to get that ... That'll make them happy.
	CMP	Gosh, how did that thing get so dirty?
	LMP	... with us probably.
	CDR	Can you get at it okay, Jack?
	CDR	Anyone going to want the med kit?
	CMP	Jack, you want a pill? You want Lomotils or - -
	CDR	... set it back here. You may want ... If you can't find it here, ... floating around the cockpit. ...
	LMP	... to unpack everything.
	CDR	No way to - no way to - That depends on how ... it gets.
	CMP	That's what I thought, Gene. They don't care about pumping the cabin up. But they don't like having that ... in here either.
	CDR	Yes.
	CDR	Coming up.
	LMP	How much is the pressure now?
	CDR	May have to do it again tomorrow.
11 01 33 32	CDR	... is about 5.4.
	CMP	Yuk. The decompression got chlorine all over back here.
	LMP	What?
	CMP	Chlorine.
	LMP	... about chlorine?

[redacted]

	CMP	Shoot, this thing is all wet.
	CDR	It stays wet all the time. I haven't seen it dry since I've been here.
	CMP	Oh, yes?
	CDR	5.6.
	LMP	Where in the heck are we?
	CDR	That's good, Jack.
	CMP	...
11 01 34 34	CDR	We're looking at 5.7 in the cabin.
	CC	So are we.
	CDR	...
	LMP	... Don't put it back in. ... ask Bob if we have to do that again tomorrow.
	CDR	Bob, you going to want to do that again tomorrow?
	CC	Yes, Gene. ... do it again prior to emptying the OPS.
	CDR	Okay.
	LMP	... from ... wrapping around here.
	CDR	Okay.
	CMP	A good pack job. A good pack job. That ... thing. Pardon the French, but -
	CMP	I can't turn the darn thing.
	LMP	There you got it started. That'll do it. Try again. If you get the threads wrong, you can't -
	CMP	Well, the threads were right.
	LMP	Sometimes you can screw it on real easy.

[redacted]

11 01 36 55 CMP I think the problem was that it didn't break the - You know, the needle doesn't penetrate that - I don't know where in the heck we are.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03445

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 17 37 18	10 17 39 09
11 01 55 50	11 01 55 50

Voice good, time good.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

10 17 37 18	CDR	Jack, you got ... moving around out there.
	LMP	I grabbed ... as far as I could over here.
	CDR	You ... your foot was in here. You back in there.
	CDR	Yes, you did get tangled up with the camera cable to start with, I guess. I don't know what you did with all those straps for these cables, but I'd like to put a piece of tape on them.
10 17 38 23	CDR	We're missing the time lines ... our Flight Plan.
10 17 38 30	CDR	You want to get the O_2 heaters off?
10 17 38 38	CDR	Hello, Houston; this is America. Looks like the repress package is up - is back up; my surge tank is back up. Would you like to turn the cell off and turn the O_2 heaters off?
	CC	Geno, EECOM says affirmative to all that.
	CDR	Okay, Gordo, how are you doing?
	CC	... Ron's stroll around the service module. ... had a ball.
10 17 39 09	CDR	Yes, he did.

TIME SKIP

[redacted]

11 01 55 50 CMP

... the ... that it didn't break the - you know, the needle doesn't penetrate that -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03443

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
10 16 50 56	10 17 52 21

Voice poor; time good.

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[redacted]

10 16 50 56	LMP	... 4 days, we ... - I'll put it on for reentry anyway, I think.
	CDR	Hey, what are you getting up? The bag? There's a - it's a - could we stow it? There's nothing to hook on. Forgot about that.
	LMP	Well, yes, but - huh?
	CDR	Through there? Like that? It seemed like it would go this way. We'll hook it like this.
	CDR	Okay, but we got to hook it here somewhere, temporarily. Give him enough room to get his thing in. Well, here's where it goes. Right here. Right on my ... couch. Comes through from the - from the hatch side, right?
	CDR	Huh? Say again? I want - -
	SC	...
	CDR	Before we hook this end, let's - let's get this - oh, boy. Get this out of the way. For the front. Got a latch cover for that handy?
	CDR	Just let it sit there.
	CDR	Bet you don't have a hatch handle. There. Hatch handle. Okay. Jack, you going to stow? ... getting your legs up.
	CDR	Wait a minute. Okay. Okay. Get this part of the bag up. How can I get to it? Well, on this - on the front of the - on this - Here you go.
10 16 54 58	CDR	There's a lot of room up here. Boy, I'm glad we got that 9 inches, I'll tell you.
	CDR	Oh, you - Is there a center thing to hook? Wait a minute - let me - let me hook it. Yes, it is, Jack. Well, yes, I guess. Wait a minute.
	CDR	Is it - is it the same kind of hook, Ron? With those short little rings? Oh, shoot! Yes, I see it. I can't - I can't do that. You'll have to pick it up from the back end to do that. I'll hold it too,

[redacted]

		Jack, if you want to push it. Well, shoot. You're - Yes, you're almost there. You almost did. Is that a leg or an arm?
	SC	...
10 16 56 06	CDR	Yes. You got to - you got to push it through, and then there's a ring that snaps on the hook. Yes, I can't get my arm in there because - I could get it if you loosen the back side of the bag. See it? There it is. It goes through from your end - No, from your end - goes through both of those square slots. Yes. No, from your end. Well, no, it's got to go through from your end into every hook. If you can go through from your end, just - -
	SC	...
	CDR	The hook broken?
	SC	...
	CDR	Well, just stick it through it. I'll - I'll get it down here. Just stick it through, and I'll get it down here. I - I'll put the back - -
	SC	...
10 16 57 57	CDR	That's all right. I'll just put the ring on it, even though it's outside. It'll stay, I think. Yes, you got to come through there from your side, see. And that's what I say, you've got to push through there.
	SC	Okay.
	CDR	Okay. How's that? Let me see if I can get my ... going. Yes, I've got a ... Okay, the hook's fixed.
	CDR	Here's a PRD that's going to get lost back there. Yours?
10 17 00 25	CDR	No. Wait. Let's leave ... up like this.
	CDR	I think you got it now, Jack. Here it is. I've got it. That'll make use of the bag.

[redacted]

	CDR	Hey, you're way - you're back here. You're all the way back. I think - Yes, I don't see how you can - I don't see how you can get any more.
	CDR	Yes, I guess - you're - Yes, but somebody's got to go on comm, so - -
	SC	...
	CDR	Put this over by Jack. This thing. Will you? Ron, are you going on comm?
	CDR	Ron? Did you go on comm? Oh, boy! ...
	CDR	Do I hear you on?
10 17 02 50	CMP	Yes, I'm on.
	CDR	You can get off then.
	CMP	Are we ... them down?
	CMP	(Laughter) Gee, it's ... (laughter).
	SC	...
	CMP	Yes (laughter).
	SC	...
	CMP	(Laughter) Yes, they sure have. (Cough) Man, I don't know. What did he say?
	SC	...
	CMP	(Laughter) He was sure worried about my scissors down there (laughter).
	CDR	... the ...
	CMP	Yes - worried about the scissors and where they are. Yes.
10 17 07 25	CMP	It's open right now, but we're going to close it here shortly. Do you think we need it closed now?

[redacted]

	CC	...
	CMP	Oh, I see, okay. Yes, we'll - we'll close it after a bit here. (Cough)
10 17 07 50	CMP	Well, we can CLOSE the WASTE STOWAGE VENT any time now to restore fuel.
	CMP	You can get a little bit more air down there, if you want - you can get a little bit more air, if you want to undo those things there.
	SC	(Laughter) Oh, ...
	CMP	Well, I gave you something to bring back.
	CMP	(Laughter) Yes, that heat.
	SC	...
	CMP	Well, yes, in that - Yes.
	CMP	Isn't it, though?
	CMP	(Laughter) Yes, when I first stuck my head out there, the - -
	SC	...
	CMP	Yes, I know. We're in ... Wait a minute.
	CMP	Okay. Aaah. Whoosh.
	CC	...
10 17 13 35	CMP	That ... Wait a minute.
	CMP	Houston took who? 61 to 17?
	CC	...
	CMP	Okay, 20 to 3, New York over Dallas, huh? 20 to 3, right now. New York over Dallas.
	CC	...

[redacted]

	CMP	Okay. Yes.
	SC	... got it. This the ..., huh?
	CMP	Oh, okay. That's all right.
	CMP	They're coming along. We've got two guys who have their suits off now.
	CMP	(Laughter) That's right. Hey, hope North American doesn't think I was badmouthing their spacecraft down here because, you know, there was a little bit of blistered paint on it. That doesn't mean anything. It's still a very good spacecraft.
	CMP	(Laughter) Okay.
	CMP	Okay, Bob.
10 17 18 17	CDR	Okay, Houston. The CDR back up.
	CMP	Yes, we have a site handover here in about 2 - 2 or 3 minutes ... lose comm.
	CMP	Do we have to take these off in this - -
	CDR	...
	CMP	Do we have to take - -
	CDR	You don't have to, just the small one.
	CMP	How's it look? Well, we better put it on ...
	CMP	... go the ...
	CDR	Well, hand me that other LEVA bag, and I'll put ...
	CMP	... these LEVAs? I didn't even notice the scratch.
	CDR	... still in the ...
	CMP	(Laughter)
	CDR	Okay. Let's ... that LEVA to you, or anything else like that?

[redacted]

	CMP	No.
	CDR	... or anything like that?
	CMP	Yes, I did, matter of fact. I took both of them.
	CDR	Did you?
	CMP	Yes. Yes, it's where somebody scratched them with the - -
	CDR	Yes, you ... - -
	CMP	Put a scratch right down the middle of it when I was trying out the visors.
	CDR	Here, I'll get the ... connected.
	CDR	Oh.
10 17 20 15	CDR	There's a ... in the thing. Nothing worth ... about that.
	SC	(Cough)
	CDR	Get your helmet, Jack. Let's put it in here.
	LMP	Just a second. I'll get rid of it.
	CDR	Oh, this is Ron's.
	LMP	... flight accessory bag. Shoot! I didn't get to stick my head out that end.
	SC	...
	CDR	Got a purge valve ... to happen.
	CMP	Uh-huh.
	CDR	WASTE STOWAGE VENT still OPEN?
10 17 25 17	CDR	Houston, America. The WASTE STOWAGE VENT valve is CLOSED.
	CDR	... I think ... the checklist and see what we missed out on.

[redacted]

	CMP	...
	CDR	He ain't on ...
	LMP	Why don't you ... give ...
	LMP	Yes.
	CDR	Give me that ...
	SC	...
	CDR	That's worse than that ... checklist.
	LMP	What ...?
	CDR	Now then. As soon as you pick up the checklist, I think you'll find out we got quite a bit of it. And I won't take these off because I don't know where they go. I'll just take -
	CDR	...
	CMP	...? My ...
	CDR	...
	LMP	... No.
	CDR	Jack, are you - you available?
	LMP	Yes, I just shipped some stuff to you. What about these, ...? Okay. Well, I - I'll read them off as soon as you get out of your suit.
10 17 33 23	CDR	Couple things. ... we got. ... we got.
	CDR	Better ... those switches ... set in that spacecraft. That's the ...
	LMP	Yes.
	CDR	All right.

[redacted]

	CDR	You guys, I'll bet, are hungry, aren't you? Know why? Because we got up at 7 and ate breakfast, and it's now 5, and we haven't eaten yet.
	CDR	Is your ... normal?
	LMP	I just think it may be somewhere. I can't - ... there.
	CDR	Jack, you catch ...?
	LMP	No, ...
	CDR	Okay. Well, watch that ...
	LMP	...
	CDR	Probably couldn't hear. Your foot was in here.
	LMP	... back in there.
	CDR	Yes, you did get tangled up in your cameras.
	CMP	... Is that what I did?
	CDR	I don't know what to do with all those cameras and cables. And ... (laughter).
	CDR	... in the Flight Plan.
	CDR	Ever get the O_2 HEATERS OFF?
10 17 38 37	CDR	Hello, Houston; this is America. Looks like the REPRESS PACKAGE is UP. My SURGE TANK is back UP. Would you like us to turn the cell off and turn the O_2 heaters off?
	LMP	Okay, Gordo. How you doing?
	LMP	Yes, he did.
	CDR	Is eating a contingency in our EVA - post? (Laughter)
	CDR	Ron? ... this.

[redacted]

	CMP	Okay.
	CDR	Let you do (laughter) it again ... water will kill you (laughter).
	CMP	All right, that's ... That's ...
	CDR	Ron? One small thing ...
	CDR	Yes, let's get this back operational here.
	SC	...
	CDR	Huh?
	SC	...
	CDR	I just wrote, "EVA day," to go with ...
	CMP	...
	CDR	Don't know what else they can do with it. No way to transfer it from the LM, that's for darn sure. And I'm not going to drink it so I can ...
10 17 44 47	CDR	I took my ... off, as a matter of fact. I hope not.
	CDR	Sorry, I put my ... on ...
	CDR	All right?
	CMP	Yes.
	CDR	Okay.
	CDR	Okay.
	LMP	What?
	CDR	Are we ... in the Flight Plan?
	LMP	...
	CDR	... time for it. Let me get this suit out of the way here.

[redacted]

	LMP	... Yes, ... - -
	CDR	No, put your suit in ... - What did you say?
	LMP	...
	CDR	Pecan! Hiding them out again, huh?
	CDR	Huh?
	CMP	...
10 17 49 42	CDR	That's where you've got to put the rock box, too. ... put the rock bag up there. Still get my ... rocks.
	CDR	... getting ...
	CDR	I'll tell you one thing. For these constant wear gar - or these coveralls, you don't have to press them very often.
	CMP	(Laughter)
	CDR	They just wrinkle now ... (laughter).
	CMP	Sure looks funny.
	CDR	Yes.
	CC	...
10 17 52 21	CDR	Go ahead.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03458

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING

Time Segments (AET)

From	To
10 17 37 19	10 17 39 09
11 01 36 56	11 01 36 56

Time and voice good.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

10 17 37 19	CDR	Jack, you got your - -
	LMP	... moving around out there.
	CDR	I grabbed the ... as far as I could over here. ... in the mirror. Your foot was in here. Get back in there. Yes, you did get tangled up with the camera cable to start with, I guess. I don't know what you did with all those straps for these cables. Why don't you just put a piece of tape on it or something?
	CDR	We're missing time lines on the Flight Plan.
10 17 38 31	CDR	Did you ever get the O_2 HEATERS OFF?
	CDR	Hello, Houston; this is America. It looks like the - REPRESS PACKAGE is up. My SURGE TANK is back up. Would you like me to turn the FILL OFF and turn the O_2 HEATERS OFF?
	CC	...
	CDR	Okay, Gordo. How you doing?
	CC	...
10 17 39 09	CDR	Yes, he did.

TIME SKIP

[redacted]

11 01 36 56 CMP I think the problem was that it didn't break the - you know, the needle doesn't penetrate that - -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03460

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 08 30 30	11 08 32 17
11 08 36 57	11 08 37 18
11 08 51 10	11 08 51 46
11 08 56 10	11 08 57 55
11 09 09 04	11 09 14 52

Voice fair; time good.

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[redacted]

11 08 30 30	CDR	I'm glad I'm not in those suits.
	CMP	... jett bag ...
	CDR	Well, we - set up a warmer configuration, they'll call you.
	CMP	Put the spacecraft in a -
	CDR	In a warmer mode. Hot dang, here's the water on the ... instead of the ice.
	LMP	Light the pilot.
	CMP	Light my fire, baby. (Laughter) (Singing)
	CMP	Start the battery A, Jack, whenever you feel like it.
	LMP	Starting now, huh?
	CMP	Yes, sir.
	CC	Okay. And, America, we'd also like to get BAT A to CHARGE.
	CMP	(Laughter) Read my Flight Plan.
	LMP	That's in work right now, Bob. Thanks for the call.
	CC	...
11 08 31 46	LMP	Well, we're trying to keep your spirits up today.
11 08 32 17	CDR	You hear what he said?
	CMP	Oh, okay.

TIME SKIP

[redacted]

11 08 36 57	CDR	I think you guys are ...
	CMP	Yes, sure. We check with each other.
	CDR	Bring up the water on these ...
	CDR	Boy, I bet these are pretty active. Let's get that darn ... valve.
11 08 37 18	LMP	That's 4 - 14 degrees.

TIME SKIP

[redacted]

11 08 51 10	LMP	One more.
	LMP	Houston, 17.
	CC	...
	LMP	That's affirm. I've got some reports for you, if you're ready to copy.
	CC	Okay. ...
11 08 51 46	LMP	Okay. CDR menu - I'll try negative reporting. He did not eat three apricot cereal cubes, pears. And at lunch he did not eat half a cereal bar. And at dinner he did not eat tomato soup, half a hamburger, and the date fruitcake. Add - On lunch he had also - positive now - lemonade, two pec - -

TIME SKIP

[redacted]

11 08 56 10	LMP	Boy, you drink a lot of water.
	CDR	Yes.
	LMP	That should do it, Bob. Thank you for your indulgence.
	CC	Roger, Jack. ...
	CMP	Wish I had another coffee about now.
	CDR	... got something to do.
	CMP	... out?
	CDR	Take them until about noon to figure out - -
	CMP	Yes, while you're still - -
	CDR	- - What's going on and what you said. And then they'll say they really don't fully understand it and they've got to talk to us. Hey, you guys cold?
	CMP	...
	CDR	... inverter, and that would be MANUAL - -
	LMP	Houston, 17.
	CDR	- - ... valve, right? Tell them to repeat those ...
	LMP	We thought we'd warm up the cabin. And if I recall correctly, you approve of us putting INVERTER 3 onto MAIN A and going to MANUAL on the TEMP IN and taking the EVAP TEMP up to about 59 degrees.
	CC	That's affirmative.
	LMP	Oh my, how's that for a memory?
	CDR	...
	LMP	How about weather map data when we do it though.
	CMP	Yes.

[redacted]

	CDR	Let me know - Let me find the valve, and then - where the heck is it? I haven't been down here.
	LMP	Down there in the water ...
	CMP	Okay.
	CDR	Over here?
11 08 57 55	LMP	No, no, the - -

TIME SKIP

[redacted]

11 09 09 04	LMP	... 4 ...
	LMP	Thank you.
	CMP	... pretty ... out ..., doesn't it?
	LMP	If you're loose, I don't understand why they told you to eliminate cereal.
	CMP	I don't either, you know.
	CDR	Doesn't make any sense.
	LMP	I never heard that before.
	CMP	They are more concerned with the gas, than they were with the loose bowels, I think.
	LMP	Faulty hardware equipment; hardware in the spacecraft.
	CDR	I'll never forget that face - -
	CMP	They ate too much - -
	CDR	- - mouthing off when we were talking long time ago.
	CMP	What's it supposed to do?
	LMP	How's that shower in Skylab work?
	CMP	I don't know.
	LMP	... trap shot into it and just -
	CDR	... spray water ...
	LMP	It's a lot of holes or something around here.
	CDR	It would be too hard to ... shower if you can get rid of the water ...

[redacted]

	LMP	Yes. I've had a lot of ... showers.
	CMP	(Laughter)
11 09 14 52	LMP	Urine showers, milk showers, hot water showers.

# # #

[redacted]

(This page Unclassified)

Tape 17-03467

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 09 14 26	11 09 17 07
11 09 29 52	11 09 36 43

Time and voice good.

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[redacted]

11 09 14 26	CMP	How does that shower in Skylab work?
	LMP	I don't know.
	CMP	... strap yourself into it and it just - -
	SC	... it just spray water - -
	CMP	Yes.
	SC	...?
	CMP	I think so. A lot of holes around you. Shouldn't be too hard to have a zero-g shower if you can get rid of the water ...
	LMP	You know, I've had a lot of zero-g showers.
	CMP	(Laughter)
	LMP	Urine showers, milk showers, hot water showers.
	CMP	Whoops, excuse me ... What time is that big thing today?
	LMP	Five o'clock.
	CDR	... stowage ... ALFMED.
	CMP	(Laughter)
	LMP	We go into the ALFMED prep?
	MS	(Laughter)
	SC	...
	MS	(Laughter)
11 09 16 12	LMP	Got to have a full stomach for ALFMED.
	CMP	Got to have a full stomach for ALFMED. ... stomach? (Laughter)
	LMP	Oh, shoot ...
	CDR	Yes.

[redacted]

	LMP	Laughter ... you get back ... You know, the real reason ... because you want to be prepared for ALFMED ...
	MS	(Laughter)
		(Music)
	CDR	That guy, what's his name there, Mauriot, is not a bad music maker.
11 09 17 07	CMP	No, he's ...

TIME SKIP

11 09 29 52	LMP	Coming up ...
	CC	Okay, would you like to hear the contents of this telegram that went out of here today to the "U.S.S. Ticonderoga"?
	LMP	Yes, sir.
	CC	It's to the "U.S.S. Ticonderoga," passed to the NASA Team Leader. It says, "Stullken, we know exactly where the spacecraft is, and we know exactly where it's going to land. Now, if you can figure out approximately where you are, we will be in good shape."
	SC	(Laughter)
	CC	Pull yourself together, and move 50 feet from the target point. Let's end this program right." Signed, The Guys in the Trench, MCC, Houston.
	SC	(Laughter)
	CDR	Beautiful, Bob, beautiful.
	LMP	... sounds like he might have a little bit of a cold.
	CMP	...
	CDR	Oh ...
	LMP	That's the way I felt last night after I ate, full and then all of a sudden I had to get rid of it. (Music in background)
	LMP	Probably just a result of being completely clean. That's possible.
	CMP	..., huh?
	LMP	Get a little bacteria going or something.
	CMP	Oh, bacteria. I don't think there was any bacteria.
	LMP	Well, but I mean, I think that's what does it. You know ...

[redacted]

	CDR	...
	CMP	No, I don't know about that. I cut myself with a dark slide the other day - that needle, I guess.
11 09 33 01	CMP	How about handing the ... camera.
	SC	... little one ... Nikon ...?
	SC	I'm going to set up and get some close pictures.
	SC	Should have taken pictures of the ...
	CMP	Yes.
	LMP	What are we dealing with here? All set?
	CMP	I don't know. You have to adjust the ...
	LMP	No, I mean ASA wide?
	CMP	ASA 4000, yes.
	LMP	Reset the -
	CMP	... may be too much light. I don't know.
	LMP	Looks like we have our old shutter failure here.
	CMP	We did?
	LMP	Yes.
	CMP	... do that. ... one on.
	LMP	...
	CMP	Isn't that the way we did it?
	LMP	That did it.
	CMP	That did it? When you're ready ... I want to start ... I can't drink that much water.
11 09 34 23	LMP	... wide open, too.

[redacted]

	CMP	Is it wide open?
	LMP	...
	CMP	... Okay.
	LMP	Hey, it's just a drop ... drop ...
	CMP	... can't get a drop (laughter).
	LMP	Just barely squeeze it.
	CMP	I did. It just squirts - sprays.
	LMP	...
	MS	(Laughter)
	SC	...
	CMP	(Laughter)
	LMP	Move your foot.
	CMP	Oh (laughter).
	LMP	I'll take this stern commander-type picture.
	CMP	Right.
	LMP	Admiral America.
	CDR	...
	LMP	No, it's flammable.
11 09 36 43	CMP	(Laughter)

# # #

[redacted]

(This page Unclassified)

Tape 17-03469

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 10 26 01	11 11 20 05
11 11 39 19	11 11 46 37

Voice fair, time good.

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[redacted]

11 10 26 01	LMP	... let me stow this thing ...
	CMP	Yes, okay ...
	LMP	Well, ALFMED is in A-8.
	CMP	... you have there now.
	LMP	Okay.
	CMP	Right here.
	LMP	Ron, let's stow our dirty underwear in A-1, too.
	CMP	Okay.
	LMP	You want A-8?
	CMP	Yes.
	LMP	ALFMED.
	CMP	Wait a minute.
	CDR	... have an ALFMED?
	LMP	Okay. ALFMED ought to be in there - 35-millimeter cassettes. Four of them in the bag.
	SC	...
	LMP	They up here?
	SC	Yes, ...
	SC	... still got the ... camera.
	SC	... , Ron, ... get back up here.
	LMP	That's ... The filters, they're all - they're in the same bag right?
	SC	... cassettes in here?
	LMP	You want the CIN cassette in there?
	CDR	Yes, stick it in the bag because of the ... be in the camera, see?

[redacted]

	LMP	Okay.
11 10 27 32	CDR	Unless we finish it up today.
	LMP	What we really ought to do is put that CIN cassette over here in - -
	CDR	... camera ... camera goes?
	LMP	Yes, where the camera goes. Stick one of these ... around there ...
	CDR	Oh, boy.
	CDR	This film is all used, huh?
	LMP	Yes, it's all used.
	LMP	Okay. You ready?
	CMP	No, hold on a minute.
11 10 29 02	LMP	Oh, okay. Well, doing that, there should be 75-millimeter mags, three of them in a bag.
	CMP	Okay ...
	LMP	I see you've got two others in there, which I don't carry -
	SC	...
	LMP	Not for A-8.
	CDR	Ron, here you go.
	LMP	You think those are supposed to go in R-13, too?
	CDR	No.
	LMP	Let me check.
	LMP	Four, three, and three should be in R-13.
	CMP	Four, three, and three?
	LMP	That's right.

	CMP	... in there, too.
11 10 29 50	LMP	No, they're crossed out on here.
	CMP	... put them?
	LMP	Well, we'll find out, I guess. Well, let's see. Maybe we can leave them in there and see what happens.
	CMP	Okay.
	SC	...
	LMP	Okay, Bob. I'm up to date on the O_2 purges now.
	CMP	Let's see, we don't want to open A-2, do we?
	CDR	Huh?
	CMP	There's still some room in A-2 for that thing.
	CDR	No, let's not open it unless we have to.
	CMP	No, let's - no, let's ... pack it around in B-1.
	CDR	B-1 ...
	LMP	(Cough) The tape cassette kit is supposed to go in there, Ron.
	CMP	Right in here.
	LMP	Yes.
	CMP	Okay.
	LMP	There's the batteries and the EMU maintenance kit.
	CMP	There should be two of them, though ...
	CMP	Yes. All right, there's two EMU maintenance kits.
	LMP	Okay.
	CMP	Batteries?

[redacted]

11 10 31 17	LMP	Well, the tape recorder stuff. No.
	CMP	Okay. We'll leave room under there for the tape recorders.
	LMP	Okay. The inflight exerciser.
	CMP	... supposed to be in R ... exerciser ... the one down in the corner.
	LMP	Over here.
	SC	...
	LMP	I think they stay there. H_2 gas separators.
	CMP	Are there two of those things around?
11 10 32 08	LMP	No, not that I know of.
	CDR	We'll take that thing off ... mark them.
	LMP	We're going to have to get into - into A-8, again. We're going to keep playing tapes and using the separator.
	SC	Yes.
	LMP	Snag line should be in there.
	CMP	...
	LMP	PGA interconnects?
	CMP	Yes, they're there.
	LMP	Tone booster. Let's put that in here.
	LMP	Okay. There are four items not in there yet. And the 70 millim - the extra mags. I don't know - Those are - -
	SC	...
	LMP	Well, they're not listed here, but - Oh, no, excuse me. That was just section 1. Section 2: CWGs, three - we have two, I guess.

[redacted]

	CMP	Two.
	LMP	LM temp stowage bag, purse - we don't have that any more.
	CDR	No, we've got that one ... one bag is down there.
	LMP	No, that's the temporary stowage bag. The purse is what they mean.
	CDR	... down here.
	LMP	The purse isn't here.
	CMP	Yes, but what is that thing that ...?
	CDR	Did you ever get that stowage - -
11 10 33 41	LMP	That's the tether bag.
	CDR	...
	LMP	Well, I don't know. We can put that in there instead.
	CDR	Put that in there. Yes, let's - -
	LMP	Where did we put that? There it is. No, that's not it.
	SC	...
	LMP	Okay. Here.
	CDR	35-millimeter camera adapter.
	LMP	... Okay. Lightweight headsets, section 2.
	CDR	I'm going to wear mine.
	CMP	...
	LMP	You will, huh? Well, let me give you mine.
	SC	You don't want me to wear those.
	CMP	There's the 35-millimeter bracket up there in ... 1.

[redacted]

	SC	Okay.
	CMP	Just under that - 16-millimeter bag.
	LMP	Okay. You all have a light headset.
	CMP	Okay.
	SC	...
	SC	I don't think we ... that one.
	LMP	What's that? Oh, yes.
	CDR	Do you know which ...?
	LMP	The ALFMED blindfolds will go in there. We used those. Okay, section III: CWG electrical adapter, one in a bag.
	CMP	There you are.
11 10 35 57	LMP	Okay, 70-millimeter mag, three in a bag, LM.
	CMP	Wait a minute. Okay, what were those other 70s you gave me?
	LMP	Well, they're - they're on there, too, in section I. So - -
	CMP	Okay. Well, I need three items. That's two, and I need three 70-millimeter mags.
	LMP	LM ones?
	CDR	No, the ones you read before.
	LMP	Well, the ones I read before - I guess they're not LM. All right. Okay.
	CMP	So I need three of them in a bag, coming out of F-2.
11 10 36 39	CDR	I'm looking for that bracket, Ron.
	CMP	That bracket - it's a little flat blacket - bracket.
	SC	... That's it.

[redacted]

CDR What about your sextant adapter, your eyepiece?

CMP Oh, I'll ... something. I forgot where it goes. Have to look on the entry.

LMP Okay, Gene. We need a - -

CDR There you go, Ron.

LMP - - three 70-millimeter mags in a bag.

CMP They're up in F-2.

LMP F-2.

CMP There should be a three bagger up there.

LMP ...

CMP Which one?

CDR ...

LMP That's a three bagger we're looking for. A bag of three.

CMP Yes, ... it's got - I don't know, three or four pictures left. No, it's fully exposed. ...

LMP ... 105.

CMP Yes, but I only could go to 106. The rest of them I had to keep for calibration or something.

CDR ...

CMP No, it doesn't make any difference.

LMP There should be a bag there.

11 10 38 07 CMP There should be a bag - three bagger.

LMP I guess you don't care anymore, do you, Ron?

CMP No, I don't care anymore. ...

CDR You know which one of these was the rendezvous?

[redacted]

	LMP	No. You can look back in the Flight Plan and find out, but -
	CDR	Mark it if you find out.
	CMP	That's in section 3 of the Flight Plan.
	CDR	Section 3?
	LMP	Yes. What have we got now? What have we got out now?
	CDR	...
11 10 39 07	LMP	Okay, Ron, here's three.
	CMP	Okay. ...
	LMP	Well, Gene wants to mark one of them if it's the right one.
	SC	...
	LMP	Should be configure camera.
	CDR	Beginning of the rendezvous?
	CMP	Before the rendezvous, yes.
	CDR	Configure camera - KK ...
	LMP	I don't know whether KK is in there or not.
	CDR	Yes, ...
	LMP	I didn't put them in so Ron can tell. I can't get them in any other way.
	SC	Did you ...?
	SC	There's KK.
	SC	Huh?
	SC	... KK.
	CDR	Write something on there.

	LMP	Okay, Ron - Stand by on those. You got the camera bracket, tool kit; 16-milimeter mag, two in a bag?
	CMP	I don't have those yet.
	LMP	Okay. But you have the LM - you have the 70-millimeter LM - two LM magazines.
	CMP	Yes. I've got a total of 5 remaining.
	LMP	Yes, that's right.
	CMP	And I will have a total of 3 - ...
11 10 41 00	LMP	Okay, do those two 16-millimeters come in a four-magazine package? Yes, probably.
	CDR	... I got four magazines ...
	LMP	Okay, here's - here's two.
	CDR	...
	LMP	... JJ.
	SC	...
	LMP	No, I just want two in there.
	SC	...
	LMP	Okay, here's one VHBW. If we ever need any ... today, that's where we put them.
	LMP	Okay.
	LMP	Okay. Your waste - You ready?
	CDR	No.
	LMP	Well, waste management backup bag. That's all in there. We haven't used that, have we?
	SC	No, it's still there.
	LMP	How about the urine filter assembly, three in a bag? I guess we've taken ... out.

[redacted]

	CMP	We don't need them anymore, do we?
	LMP	... use them once.
	CDR	...
	LMP	There's two, I think.
	CDR	R-11.
	LMP	R-11.
	CMP	... here they are, right here.
	LMP	Got all three of them?
	CMP	...
	SC	... one ...
	LMP	The ... is ...
	CDR	... I got a big one ...
11 10 43 37	LMP	No, you want the little one. The big one stays there.
	SC	No, ...
	LMP	It doesn't make a lot of difference.
	LMP	Okay. But your waste management backup bag is in there.
	LMP	Okay, side of A-8. I guess that's it for A-8. We've got five items to add in there.
	SC	...
	LMP	Okay. Tape cassettes, tape batteries, H_2 gas separators, tone booster, and the ALFMED blindfolds.
	CMP	... got a lot of room.
	LMP	Got some room left, huh?
	CMP	I'm pretty sure we will have.

[redacted]

	LMP	Okay. Why don't - on the - ... why don't you write down that mag ...
	SC	...
	SC	... write down which mags ...
	CMP	... awhile ago ...
	CDR	... get it all, Ron?
	CMP	Yes.
	CDR	...
	CMP	Yes.
	CMP	What have you got room enough for?
	CDR	This much room, except we've got a tone booster.
	CMP	The tone booster can fit right in here. ...
11 10 45 33	LMP	Okay. I've got a note here if you've got some room in there.
	LMP	It looks like this one ...
	LMP	Okay.
	SC	...
	SC	...
	LMP	Hand them up here and I'll put them in the bag.
	LMP	Okay. On the side of A-8, you ought to have the vacuum brush.
	SC	... right here ...
	CDR	What are you looking for? The vacuum brush that's down in the ... bag here?
	LMP	No, right over here, Gene.
	CDR	No, that's ...

[redacted]

	LMP	Gene?
	SC	...
	CDR	Well, I know, but ...
	CDR	The vacuum brush and what else?
11 10 47 19	LMP	Okay. The urine hose with adapter and two straps we'll have to leave out. Right?
	CMP	Yes, we'll have to leave it out.
	LMP	Okay. I've got it marked. EVA guards - left, right, and center with straps. We've got those in there. And unipod pole assembly's in there. So the hose is left. Okay. Pick your next spot.
	CMP	The only one we got left is A-7.
	LMP	Oh, no. We've got - what?
	SC	The intervalometer.
	CMP	Oh, yes, we do.
	LMP	I get my - I can get the intervalometer into U-1 if you want.
	SC	...
	LMP	One does. Yes, 20-second or ... And I can get that - Anybody want to use the monocular again?
	CMP	No, I don't think so.
	LMP	And the - Hand me that stowage bag, and I'll get it out of there.
	SC	... over here.
11 10 48 52	LMP	It's under your couch.
	SC	...
	LMP	Okay.

[redacted]

	SC	...
	LMP	Yes.
	LMP	I will verify that. Where did it go? Where did the book go? The book.
	LMP	U-4, we add cassettes, batteries, intervalometer ... 250. That's done.
	CMP	Yes. I guess we may as well start working on - -
	SC	...
	LMP	You want A-1?
	CMP	... and see if we can get the rest of them.
	LMP	Okay. A-1 should be 16-millimeter mags, seven in two bags.
	CMP	Oh, that's where they all go, huh?
11 10 50 29	LMP	And the 70-millimeter mags, four in two bags.
	CMP	I got one ... around here. Give me that one.
	LMP	Go ahead.
	CC	About 15 minutes or so ago, we noticed ... in the AUTO position.
11 10 51 23	LMP	It is in the AUTO position.
	CC	- - in the AUTO position.
	LMP	And we see the "2" here also.
	CC	Okay, we're - we'd like to just leave everything like it is ...
	LMP	Okay.
	CC	We don't anticipate any problem here ... number 1.
	CDR	Jack, you need this now?

[redacted]

LMP Yes, I will. Why don't you just hand me a bag?

CDR Okay, Ron. Here are two 70s. ... here.

LMP You need to end up with four 70s in two bags.

CMP Four 70s in two bags.

LMP Seven 16s in two bags.

CMP Okay, I ... two ...

LMP No, you got those.

CMP ...?

CMP ... 70-millimeter camera bracket ...

LMP Yes. Sextant adapter, also.

CMP 70-millimeter -

LMP Did you get the 16s yet, Ron?

CMP No.

LMP Huh?

CMP No, I don't have the 16s yet.

LMP Have three.

CMP Okay. ... We're going to need that ..., okay?

LMP Well, one of those is not - -

CMP Okay. ...?

LMP No.

CMP ...

LMP Why don't you hand it to me, and I'll put it in my bag for you.

CMP ...

LMP Well, I don't want ... emptied out, I think.

[redacted]

	CMP	...
	LMP	I don't know.
	CMP	...
11 10 55 25	LMP	Okay, where do you stand on 16s? You got seven of them yet?
	CMP	I've got two (laughter).
	LMP	Can you find any more 16s, Geno?
	CDR	Yes. Over there.
	CMP	... Wait a minute. Okay. We've got two more - in R - in R-13 right here.
	LMP	Here's the intervalometer also, Ron. It belongs down there.
	CDR	I have three more here for you. ..., Ron.
	CMP	No, we use that internal one, Geno, for - I think he said ... here.
	CDR	...
	LMP	How many do you have now, Ron?
	CMP	Okay, I've got three - four - five.
	LMP	Five? There's one on the camera and - -
	CMP	Okay, ... six.
	LMP	- - there should be one somewhere else.
	CMP	That was that - It's probably that one we took to the LM.
	CDR	What? What?
	CMP	The one you guys took to the LM.
11 10 56 34	LMP	That's right. And that's over here in R-13 now, right?

[redacted]

	CDR	Right.
	LMP	Should we leave it there?
	CDR	Leave it there.
	LMP	Okay. Then I'll change this to a "6," and R-13 is going to have a change here. Well, they don't even want those there. I wonder where they're going to want them?
	CDR	...
	LMP	That's for - that's right. I'm assuming there's some consideration for that in here.
	CDR	...
	LMP	Well, it depends on how many things you change, I guess. Whether ... means something. Okay. Got six, you've got 70-millimeter mags, the interval timer, the tape recorder, I've got marked as later. Remote control cable with strap? That's probably still in there, isn't it?
11 10 57 39	CMP	No, it's in ... 1.
	LMP	Okay. TV ringsight in there?
	CMP	...
	LMP	Okay. I'll give it to you.
	CMP	...
	LMP	Here you go.
	CDR	...?
	LMP	I don't think we need a ringsight, do we?
	CMP	...
	CDR	...
	LMP	Hardly in Earth view.

[redacted]

CDR ...

LMP Got remote control cable there, Geno?

CDR ... somewhere ...

LMP You got the remote control cable?

CDR Yes, I think so.

LMP Okay. How about the sextant adapter?

CDR ...

LMP Okay.

CMP ...

CDR ...

LMP Yes.

CMP ... Oh, we can't get it in it. ...

CDR ...

CMP ...

CDR I'll get it. ...

CMP ... little thing that goes in here.

CDR ...?

CMP Goes ... - -

LMP You got your towels?

CMP Three bags of them, yes.

11 11 01 18 LMP Okay. The LM DSEA goes there. Flag kit and APK. That's this one down here on the - in the Volkswagen ...

CMP ... this is ...?

LMP Well, we don't have one.

[redacted]

LMP And our APK goes in there.

CMP Right in there?

CDR Our APK - -

CMP What do - what do they have in R?

CDR Isn't that in R-something or other?

LMP Well, they have it in - they have it in A-1.

CMP ...

LMP Well, okay.

CDR Here, Ron, you want to ...

CMP All right. ...?

LMP Pardon?

CMP ...

LMP You want to leave it in R-1. I'll mark it there.

CMP Wouldn't it be just as well ...?

LMP Well, I don't have any idea how much thought's gone into anything. That's the only reason I'm asking - -

CMP I don't think very much.

11 11 02 41 CMP Most - most of the thought that goes into it is, hey, where is it going to fit, you know?

LMP Yes, but then I'm sure the entry guys assume that this is the way it's stowed.

CMP ...

LMP What was that?

CMP ...

LMP Oh, okay. A change to the change.

[redacted]

	LMP	Okay. I've got a bunch of items related to TV that - and the tape recorder that aren't in there. Or aren't permanent yet. And -
	LMP	That's it, Ron.
	CMP	That's all?
	LMP	For A-1, except for the TV stuff.
	CMP	We've really got a lot of room in here, too.
	LMP	How - how - how large, approximately?
	CMP	Oh, let's see. The only thing we've got left is another mag of film, and it's about the same size as one of the other side ... lot of room. ...
	LMP	Okay, on the top of that compartment, we'll eventually put the decom bag and - decom bag and the jett bag.
11 11 05 06	CMP	Okay; that jett bag is what - ... usually for - for all the LM goodies. ...
	LMP	Okay.
	CDR	... the OPS?
	CMP	A-7.
	CDR	Wet deck.
	CMP	...
	CDR	How much ... battery ...
	CMP	Which one?
	CDR	Tape recorder ...
	CMP	... recorder battery. ...
	LMP	Okay, that's - they're supposed to go in the - -
	CDR	... marked. We marked those as something that's not in A-8 yet.

[redacted]

	CMP	...
	LMP	Okay. You want - -
	CMP	U-2.
	LMP	- - U-2.
	CDR	Binoculars.
	LMP	Okay.
	CDR	Binoculars in here?
	LMP	Only stowage bags will go in there.
	CDR	Only stowage bags? Where do we put the helmets?
	CMP	I don't understand that either.
	CDR	...
	CMP	Yes, we'll ...
	CDR	... not enough stowage ...
	CMP	... - -
	LMP	Okay. Cabin fan filter in bag. Not yet. Binoculars, med kit, auxiliary.
	CMP	It's there.
11 11 06 50	LMP	Intervalometer, 8 seconds, in bag, huh?
	CMP	... not going to be - -
	LMP	Oh, that other one, the timer - that was the thing that was supposed to go over there.
	CMP	That's where the timer is.
	LMP	I'm sorry. I -
	CMP	The intervalometer goes ...?
	LMP	The 8-seconder, yes.

[redacted]

	CMP	...
	LMP	Yes.
	LMP	And - Okay. So you're waiting for the cabin fan filter in U-2. That's it for U-2.
	CMP	... bag in here ...
	LMP	What? Okay.
	CMP	(Laughter)
	LMP	That should have been in a bag, by the way. Okay.
	CMP	Decom bag?
	LMP	Okay. Pick your compartment.
	CDR	It's in U-2.
	CMP	Loan me your ...
11 11 08 59	CMP	U-2 is probably the one that ...
	LMP	Yes.
	CMP	Okay. ...?
	CDR	U-3. ... with the ...
	CMP	No, on the - -
	LMP	U-3. COAS filter, COAS bulb, 16-millimeter camera bracket - we're using that.
	SC	...
	LMP	LM docking target, yes. Docking target adapter.
	SC	...
	LMP	You got all the COAS stuff. Okay. U-3 is square. Pick me another one.
	SC	...

[redacted]

	CMP	...
	LMP	Oh, here's what they - they expected us to leave the helmets in the LEVAs.
	SC	...
	LMP	Yes.
	CMP	...
	LMP	Yes, cut and paste.
	CDR	I'm going to do that right now.
	LMP	Well, unfortun - Okay. We're going to have to fix up mine. Think I've got Ron's gloves in there now. Stuffed in there.
	CDR	... another one ... bags ... bags ...
	LMP	Yes, I think so. Yes, looks like it.
	LMP	Where are you, Ron?
	CMP	...
	LMP	Oh.
11 11 11 36	CMP	Here's another - another long - -
	CDR	Long one?
	CMP	Yes.
	CDR	...
	LMP	Return enhancement [?]. Where does that go?
	CMP	... along with the other one I had.
	LMP	It's not on here.
	CDR	Use the ... bag, Ron.
	CMP	Yes, ...

[redacted]

	CDR	...
	LMP	How short? Here, I've got one up here.
	CMP	... got one.
	CMP	Either that or we take the - -
	LMP	Here you go, Ron.
	CMP	- - ... stowed.
	LMP	That's not what you wanted?
	CMP	I'll tell you what we might do. Let me put this probe on here and tie these other bags down with - with - tie the probe to the side of these boxes along there, you know. Put the - the rock bags around the probe, the rock bag ties around the probe. ... Let's do that.
11 11 13 31	LMP	Well, there really isn't a - Wait a minute - Backup water, is that what this is?
	CMP	Yes, backup water.
	LMP	I don't know why they can't ever say names. Okay. Now, water bag assembly.
	CMP	I'm pretty sure it's the PGA bag.
	LMP	PGA bag. You're right. Will that fit in there? I don't think so.
	CMP	...?
	LMP	I don't think so. U-2. Did you do U-2 yet? I don't think you did U-2. Is U-2 going to have a lot of room in it?
	CMP	...
	CDR	You want to try to get this in U-2?
	CMP	Don't think we can stow it ...
	CDR	It won't, huh? ...

[redacted]

	CMP	That means it's probably the LMP ... - -
	CDR	It will fit into U-1. Let's see.
11 11 14 49	CDR	We supposed to have some LCGs left in this spacecraft?
	CMP	No, I don't think so. No.
	LMP	They're listed here for entry.
	CMP	Yes, because they - the reason they are is because sometimes the guys wear the LCGs in.
	CDR	That's right. That's why those LCGs - -
	CMP	Plus - -
	CDR	- - ... always ... wear the LCGs.
	LMP	Why don't we put this in there?
	CMP	Yes.
	CDR	LCGs ... going to ... Where the heck ...?
	LMP	You saving these plastic bags?
	CDR	No. I was for a while, because I thought I may have to use them for jettison from the LM.
	SC	(Cough)
	LMP	Sounds like an AC glitch or something.
	CMP	May have to shoot that thing. ... works.
	LMP	Okay.
	CMP	... thing ... stowage ..., huh? ... stowage bag up there is any ...
	LMP	Okay, U-1, we added - what did I call that thing? Waste - water bag assembly.
	CMP	...

[redacted]

11 11 18 15	LMP	Okay. U-1 is closed out.
	CMP	I think this goes down there in the LEB, doesn't it?
	CDR	Yes.
	CMP	Okay. ... short ...
	LMP	Okay. You want to know where those go, huh?
	CDR	...
	CMP	Well, ... over there.
	LMP	What do you think those might be called? Other than LEVAs? What kind of helmet?
	CMP	EVA.
	CDR	... two.
	LMP	EV gloves.
	CDR	...
	CMP	Yes, put them on the ... platform.
	LMP	Yes. We saw something last night on that, didn't we? (Laughter) ... made ...
	CDR	...
	LMP	Yes, I think that was supposed to go in A-7.
	CDR	...?
	LMP	Yes.
	CMP	... same ... with the ... switched from A-7 to A-8.
11 11 20 05	LMP	Wait a minute here. Yes.

TIME SKIP

[redacted]

11 11 39 19	CDR	How's the cabin now?
	LMP	5.5.
	SC	...
	CC	...
	LMP	Go ahead.
	CC	We've identified ... - -
	CDR	Don't worry about these things coming down on reentry.
	CC	- - ...
	CDR	(Laughter)
	CMP	Okay, Bob. I've looked at some of those things that - but ... to make sure that I've covered everything and the fact that we checked it again, why don't we go over them again?
	CMP	Wait a minute. I'll get my flashlight and then we can start doing it again, systematically.
	CDR	How's the cabin, Jack?
11 11 41 19	LMP	It's 5.5.
	CDR	It's scissors, my dear Watson, scissors.
	CC	...
	CDR	Houston, America.
	CC	...
11 11 41 57	CDR	Bob, it looks like we're going to make it on this OPS depress. She's reading zero, and she's just barely bleeding out where - somewhere around 5.5. So I'm just going to let it bleed out now, and then we'll stow it.
	CC	...

[redacted]

SC (Music)

CDR Seventeen.

LMP ...

CDR Oooh! Caught my ... on one of those hooks down there. I got to take a leak.

CMP I'm getting in the goody locker.

LMP The docking probe cable is going in there now.

CMP In where?

LMP L-2.

CDR What do you want on - -

LMP And your camera PCM cables? They're still in there?

CMP Let's see, PCM cable ...

LMP L-3.

CMP Yes, the food locker.

LMP Is the contingency feeding system in there, now?

CMP Yes.

CDR L-3? It's L-4.

CMP No, it's not.

LMP There is no L-4.

CMP No, I mean ... - -

LMP No, the contingency feeding system - -

CDR Oh, the system. Yes. The system, yes - food - the food system in there, yes.

LMP Fecal bag transfer bag? Is there one of those in R - L-3?

CMP ... fecal bag transfer bag. ...

[redacted]

	CDR	Huh? ...
	CMP	What the heck is that? ...?
	CDR	...
	LMP	Okay. R-5. You got couch straps back in there? Probe storage straps, utility straps, cosmic ray - these straps. That sounds like it's about right. R-6.
11 11 44 47	LMP	See, the chlorine syringe is not in R-6 yet, I gather.
	CMP	Now what are you doing?
	CDR	...
	CMP	Yes, but there is still a lot of little ... things we got to pick up tomorrow, isn't it?
	LMP	Yes.
	SC	...
	LMP	Your G&N Sun filters in there, now?
	CMP	Yes, they're in there.
	LMP	Did you put the helmet stowage bags in the - -
	CMP	... Yes, - -
	LMP	- - U-2 yet?
	CMP	- - U-2. Okay.
	LMP	Okay. Where are the PLV ducts?
	CMP	Oh, they're in ... bags, I guess.
	CMP	They ain't.
11 11 46 37	LMP	They ought to be somewhere temporarily. Stow -

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03470

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER MAD DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 10 38 30	11 10 41 35
11 13 38 14	11 14 50 28

Voice fair; time good.

SECURITY CLASSIFICATION

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[redacted]

11 10 38 30	CDR	Do you know which one of these was the rendezvous?
	CMP	No. You can look back at the Flight Plan and find out.
	CDR	Mark it when you find out.
	CMP	That's on section 3 of the Flight Plan.
	LMP	Section 3?
	CMP	Yes.
	LMP	What have we got there now?
	SC	...
	LMP	Okay, Ron. Here's 3.
	CMP	Okay.
	SC	...
	LMP	Well, Gene wants to work with them, so I won.
	CDR	... should we configure the camera?
	LMP	Should we configure camera.
	CDR	Before rendezvous?
	LMP	Before the rendezvous, yes.
	CDR	Configure camera - KK. You're right on that?
	CMP	I don't know whether I have KKs in there or not.
	CDR	Yes.
	CDR	I didn't put them in so Ron could tell, but I can't get them in any other way.
	LMP	Can't get them in there?
	CMP	Here's KK.

[redacted]

	CDR	Huh?
	CMP	Here's KK.
	CMP	Looks like something on you.
	LMP	Okay, Ron. Standby on those. You got the camera bracket, tool kit?
	CMP	Tool kit.
	LMP	Sixteen millimeter mag, two in a bag?
	CMP	I don't have those yet.
11 10 40 42	LMP	Okay; but you have the LM. You have the 70-millimeter LM - two LM magazines.
	CMP	Yes. I've got a total of five LM magazines.
	LMP	Yes, that's right. And you will have a total of three CSM. Okay; and those two 16 millimeters come in a four magazine package? Yes, probably.
	CMP	No, I've got them. I've got four magazine packages.
	LMP	Okay; here's - here's two.
	CMP	Okay; let's use two of these. Here's JJ. Can you use one more? There's one roll left.
	LMP	I just want two in there, Ron.
	CMP	Two? Okay.
11 10 41 35	LMP	Okay; here's one ... If we ever need any ... made, that's where we put it.

TIME SKIP

[redacted]

11 13 38 14	CDR	Houston, America.
	CC	Go ahead.
	CDR	Do you suspect it was a - a power glitch, or do you think the control actually failed and you're just now verifying it?
	CC	Negative on either of those cases. We've just had lots of spurious changes in the past history on flights. John's sitting here saying you had a number of times on 10, and so - since we're not - We just think the power controller probably saw a temperature glitch or something, and we think it will just come right back. No problem.
	CDR	I - Come to think of it, I guess we did, now that he recalls it.
	CC	We'd like OMNI Charlie.
11 14 39 11	CMP	Okay; you have OMNI Charlie.
	CC	And while you're there, we'd like the UV COVER to OPEN now.
11 14 39 22	CMP	Okay; we'll open the UV COVER.
	CMP	Okay, Houston. I'm ready to proceed on this pitch maneuver.
	CC	Roger.
11 14 40 35	CMP	And, Houston, the readback on the flow controller there. We'll check panel 5. ECS RADIATOR CONTROL circuit breaker AC 1; verify it's CLOSED. Then we'll put the ECS FLOW CONTROLLER to position number 1. And we'll turn the ECS FLOW CONTROLLER POWER, OFF, then center.
	CC	It's OFF, center, Ron, and then up to the POWER.
	CMP	Okay. I couldn't figure out my writing. Okay; that's right. The power is OFF, center, and then - back to POWER. Then wait 20 seconds, and put the ECS FLOW CONTROLLER in AUTO.

[redacted]

	CMP	Okay; you want to start that now?
	CMP	Houston, America. Do you want to start that now?
	CC	That's affirmative.
	CMP	Okay.
	CC	That's affirmative. Any time. And in case you're wondering - case you're wondering about that middle step, that's a reset to logic step by going off on the POWER and then back to POWER.
	CMP	Okay.
11 14 42 35	CMP	Okay. ECS FLOW CONTROLLER is going to position 1. Okay; ECS POWER is OFF, and it's back to POWER. And we're waiting 20 seconds.
11 14 43 14	CMP	Okay; FLOW CONTROLLER is going to AUTO now - and stays gray, it looks like.
	CC	That's what we expected. And needless to say, Ron, we'll be watching your ECS system very carefully for you, just in case it flips back. We don't expect any problem.
	CMP	Okay; mighty fine.
	SC	...
	CMP	... You might have the gimbal on. You just might. May have left it on. ...
	CMP	Okay; I have pitch for you at 146°.
11 14 46 51	CC	And, America, Houston. I've got a midcourse 7 and a MIDPAC entry pad.
	CMP	Okay. Just wait 1, please.
	CC	Roger.
	SC	...
	CDR	That doesn't sound like it.

[redacted]

	SC	...
	CDR	Okay.
	SC	...
	CDR	What?
	SC	...
	CMP	Yes, they're doing business. Finally got it.
	CMP	Yes. Give it the old ... Take me a couple ...
	CDR	Yes.
	SC	...
	CDR	... Did he dump them off?
	CMP	Well, yes. He dumped them off. ...
11 14 49 34	CC	And, America; Houston. We'd like to bring up the high gain so we can get the dump going and get the data down. It's a YAW, plus 15; PITCH, 204.
	CMP	Okay.
	CC	Say again. PITCH, plus 15; YAW, 204.
11 14 49 51	CMP	Okay. PITCH, 15; YAW, 204.
	CC	Roger.
	CDR	Do we have control?
	CMP	Yes.
11 14 50 28	CDR	Okay.

# # #

[redacted]

(This page Unclassified)

Tape 17-03451

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 15 26 08	11 15 49 29

Time good; voice fair.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

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[redacted]

11 15 26 08	CC	America, Houston. We'd like ACCEPT. We've got a state vector that goes with those pads we've called up.
	CDR	Okay, Bob. You've got ACCEPT.
	CC	And you can get into the Flight Plan. We gave you about a 15-minute bonus on your eat period there. You can jump right into the eat period, if you want.
	CDR	Okay. Thank you, Houston.
	SC	Might as well ...
	LMP	I'll tell you what might be the problem with that ... getting your system saturated with salt all of a sudden it starts rejecting it.
	CMP	Saturated with what?
	LMP	Salt, potassium, and what have you. Starts rejecting it and - -
	CDR	See the potassium content in our food was lower than 16. It might have taken longer to do it. Anybody seen the spoons? Oh, there they are.
	LMP	And when it rejected them into your intestines, then that soaks up water.
	SC	...
	CMP	Those ... old meatballs were a little bit different.
	SC	...
	SC	(Whistling)
	CDR	... noticed you've both ... start staying ... to eat.
	LMP	We've been waiting.
	CMP	... Right.

[redacted]

	LMP	Guess I've got food on every page of the Flight Plan.
	SC	... Oh, well.
	CDR	They don't know whether you stand in the bottom of the spacecraft.
	SC	(Laughter)
	CDR	And I don't either. Get a picture of me and my meatballs.
	SC	Yes.
	CDR	Big old ...
	CMP	Boy, he's trying ... good light attitude.
	SC	...
	CDR	One or the other has got to be upside down.
	SC	Okay.
	CDR	You know we might end up jettisoning those antennas yet, Ron.
	CMP	Why?
	CDR	Well, we had a tough time getting one out, didn't we? ... been icing up?
	CMP	Yes. ...
	LMP	... got RCS ... all over the skies.
11 15 34 13	CMP	..., our att is 60.
	SC	Ohhhhhhhhhh. Oh. Oh - Got to ...
	SC	You ...
	CMP	Watch right behind you. That's ...

[redacted]

SC Where's that?

SC See that one coming?

SC Yes, I know. Can't look now.

CMP Okay?

LMP Okay.

CMP ... thing is hard to put on. ...

CDR ... you can keep going. Let me know when you're ready.

CMP Yes, wait a minute.

CDR Huh?

CMP Wait a minute. Okay.

CDR ... get it all in. ...

SC (Laughter)

CMP That's about the only thing left.

CDR What did they say about it?

CMP They don't know which way it's supposed to ...

LMP Couldn't you describe it to them or are they all wound differently?

CMP He just wanted ...

LMP Yes, but shouldn't each comm carrier be wound ...

CMP Oh, you could, but ...

CDR We don't know what other wires may be broken ... other ones broken.

CMP ... problem ...

[redacted]

	CDR	... at least 4,000.
	CMP	500.
	CDR	Huh?
	CMP	500.
	CDR	Why 500?
	CMP	...
	CDR	...?
11 15 38 54	SC	... our UV attitude to stellar.
	CDR	Yes, we ought to be - Where's the eyepiece? Down there, isn't it?
	SC	... necessarily.
	CMP	You know it's UV attitude.
	CDR	They wanted to turn the command module right into the Sun. They've picked the right attitude.
	LMP	Yes.
	CMP	We will maneuver to - Oh shoot, I - ... about 180 degrees in PITCH and about 180 degrees in ROLL.
	CDR	You can resolve that one when you ask them. ...
	CDR	How much pitch?
	CMP	...
	SC	... roll ... pitch the other way.
	SC	... yaw a little bit.
	CDR	Return ...
	SC	...
	CDR	Huh?

[redacted]

	SC	...
11 15 40 54	LMP	It doesn't look any different now. You know, it could be the way the spacecraft is.
	CDR	Might be?
	CMP	You know, you two guys could be ... the drivers up there. Matter of fact, it looks a lot like you. - subtle.
	SC	... look that way.
	CMP	Got two drivers on the side and a little tunnel coming up the middle.
	SC	... be the eighteenth.
11 15 42 17	LMP	Ron, could I trouble you for a cup of that nonpotassium coffee.
	CMP	Nonpotassium coffee, coming up.
	LMP	Thank you.
	SC	...
	SC	No. There you are ...
	CDR	Wake me up. I thought you said this morning there was no coffee left, Ron.
	CMP	... had one, so I don't know. ... may seem like ...
	LMP	Thank you, sir.
	SC	...
	LMP	Well, what questions do you think they'll ask us today? Let's see how good you guys are.
	CDR	Oh, think they'll ask us about the ... PS monitor yesterday. Why do we ... when the other guys do not.

[redacted]

	CMP	(Laughter)
	LMP	They're going to ask you about your medical problem, Ron.
	CMP	You know ... - -
	CDR	They're going to ask you now if you and Gene, - now because you're a scientist and you've gone to the - to the Moon, and a geologist have gone to the Moon ... exotic ... within reach in the universe. At the present time, are you - can you - -
	CMP	You're going to give your hot water up.
	CDR	Have you reached the epitome of your goals or something?
	LMP	Pinnacle - pinnacle - -
	CDR	(Laughter) yes, pinnacle of life.
	LMP	Yes.
11 15 44 01	CDR	And they're going to ask me, "Now that you've been back to the Moon for the second time, have you - have you changed, or has it changed you?"
	LMP	No, they're going to ask - they're going to ask you what are you going to do now that you're - can't fly anymore.
	CMP	(Laughter)
	SC	...
	SC	... contact.
	SC	... really?
	CDR	I got to wipe that water off. You're not getting the commander's feet wet.
	CMP	(Laughter)
	CDR	I've never ... sure

[redacted]

	LMP	It was - it had rained, just a shower. (Laughter)
	CDR	Oh, I think of that half ... with the ...
	LMP	6.4 g's, gang.
	CMP	Coming up. 6.4. Whew!
	CDR	I'll tell you my impression of the - of the view of the fireball. I think you ... of your own. ... gave us the impression we ... - -
	CC	...
11 15 45 43	LMP	Okay; he'll get it. Is it by any chance printing upside down?
	CC	...
	CMP	(Laughter) I'm upside down in the tunnel.
	CC	... new trick?
	LMP	I don't see how his family is going to live with him.
	CDR	...
	CMP	We're not going to be able to do that for very much longer, you know.
	CC	About 21 hours and 52 minutes.
	CDR	You're part upside down.
	CMP	(Laughter)
	CDR	There goes your chicken soup upside down.
	LMP	There goes your garbage again.
	CDR	You knocked four things off; all the time.
	SC	Hey, there ... got a white stag on it. (Laughter)
	CDR	Ron, there's a piece of ...

[redacted]

	CMP	Whoop! (Laughter)
	CDR	The - got to say that fireball ... my impression, because I won't see it. ... Is that your ... you're at the obvious place. You know, you're at the far and of a - of a hollow, tubular, - tubular yet converging, sheet of fire. And you're on the inside looking out. But to me it was - it was just brilliant - brilliant violet-purple and white, and they were just streaming from the spacecraft. Just fires ... just like if you could see to the end of that apex, you could look 10 miles away. Maybe it is. Maybe you can. I don't know how long it is. But it - to me it was all purple - light purple and white. It was a spectacular view. Spectacular.
11 15 48 12	CMP	You don't have any fears though because you can't see nothing.
	CDR	No, I'll - I'll - -
	LMP	... by the window ... just go by ...
11 15 48 23	CDR	You'll be in the middle, and you'll be looking through clear visibility, I think. That's as I recall it. Then you can see the darn - darn tube converging; Like being on the inside of a comet, probably from where we are.
	CDR	You got that?
11 15 49 29	SC	...

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03450

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 15 47 45	11 16 26 45

Time good; voice good.

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[redacted]

11 15 47 45	LMP	- - purple, white - purple, and white. It's a spectacular view. Spectacular!
	CMP	You won't be able to see it, though, because you can't ...
	CDR	No. All I'll see ... go by the window ... as it goes by ... You'll be in the middle, and you'll be looking through clear visibility, I think. That's as I recall it, right? And you can see the darn - darn tube converging. It's like being on the inside of a comet, probably. ...
	SC	We got that. ...
	CDR	Wait a minute ... all locked up.
	LMP	Probably about right, now, I think.
	CDR	Huh?
11 15 49 51	LMP	Probably about right now.
	CMP	This butterscotch pudding has - has a big air bubble in it. It's about half full -
	LMP	Report them to the - to the Food and Drug Administration.
	CMP	Yes.
	SC	Don't ...
	SC	...
	LMP	I hope you wrote that down.
	SC	...
11 15 52 33	CMP	That's what I've been trying to figure out every night, you know. Like every once in a while - -
	SC	...
	LMP	I - I think you'd find it, because my sense of knowing where my feet and legs ... disappears.

[redacted]

	CMP	Yes.
	LMP	Have you ever - have you noticed that? All of a sudden, you're not sure whether - where they are (laughter).
	CDR	It might be something like ...
	LMP	I can - I can kind of relax a little bit.
	CDR	I think my legs ...
	CMP	Yes, they are.
	CDR	See, mine are - mine are ...
11 15 53 07	CMP	... it up like that ...
	CDR	I think ...
	SC	Thank you.
	LMP	I guess our 14th day was lift-off day, right?
	SC	...
	LMP	So, we got a 14th day by - or into the 14th day by - -
	SC	...
	CMP	First day was a 15-hour day.
	SC	Huh?
	CMP	First day was a 15-hour day.
	SC	...
11 15 55 18	LMP	I think the Flight Plan was pretty well done, Ron. I congratulate you. I cared very little in doing it myself.
	CMP	... Holloway is the one who really did all the work.

[redacted]

	LMP	Well, he should be congratulated also. I think it was an outstanding Flight Plan.
	LMP	Well, what ... about the television.
	SC	...
	SC	It's a little close.
	CMP	What matters a little ...
	SC	...
	LMP	Therefore, we ought to put it up and make a - ...
	SC	Yes.
	SC	Wonder what ...? (Laughter)
	CMP	You wasn't thinking anything about it (laughter).
	LMP	Crawling out of the instrument panel again.
	SC	Wow! ...
	SC	Now I'll get through with you.
	SC	...
	SC	... camera down and ...
	SC	(Cough)
11 15 58 04	LMP	What are you doing? Drawing again?
	CDR	Yes, I ...
	CMP	You know, I really didn't see anything this morning.
	LMP	Huh? I thought you were lying, Ron.
	CMP	No, I didn't see anything this morning.
	CDR	I did. I got about - I counted about 18 of them. ..., but I didn't want to tell him. I didn't want to disillusion you.

[redacted]

	CDR	I don't know about my bowels, but my kidneys sure are filling up fast.
11 15 59 09	CMP	That's a sign.
	CDR	Huh?
	LMP	That's the first sign.
	CMP	That's the first sign.
	MS	(Laughter)
		(Music)
	LMP	She doesn't sound as good-looking as she is; although, I don't know - never look at women.
	CDR	Yes, she's not - she's not a beautiful woman; she's - a sexy little wench. Some broad.
	LMP	I guess she does pretty well, doesn't she? ...
	CDR	She's been in Caesar's Palace in Vegas.
	SC	...
	LMP	Well, that takes care of that part of life for you.
	CDR	Yes. Right on schedule. Knocked off eating (laughter). Oh, I got to take a leak. I hate to get - everytime I do, I get my hands dirty and ...
11 16 01 46	CDR	We can set that camera up and have the patch and the flag there. And we can still get in a patch and flag if we turn it on. And then, you know, we can - If two of us get in there, one of us can just go back to ... ... setting that was already established ...
	LMP	Yes, that'll work.
	SC	...
11 16 02 11	CMP	Got anything with your name on it?

[redacted]

	CDR	With me leaking in the box.
	CMP	... upside down here.
	MS	(Laughter)
	LMP	Let me out! (Laughter)
	CDR	Our names are on the patch, Ron, I guess.
	CMP	Say hello to the ... right above the patch.
	SC	... - (laughter).
	CMP	I just ... (laughter).
11 16 05 25	LMP	... That was the first time when I concentrated or - or thought about it, I haven't seen light flashes. Tell you, the first night or two, I'm not sure I did. I thought - -
	CMP	Yes, I looked ...
		(Music)
	SC	You guys got another three-quarters of a tank.
	LMP	Gosh! Who said there's no stars out there?
11 16 08 22	LMP	Just about pointed at Polaris, I think.
	SC	What?
	LMP	Well, the Big Dipper's out here.
	SC	...
	SC	...
	LMP	If you had - No, I'm sorry. We're 90 degrees, of course. Polaris is right over there about off Y. SIM bay may be pointed at Polaris.
	CDR	... Castor and Pollux, right out opposite ... So, ...

[redacted]

	LMP	SIM bay is pointed at Polaris.
	CDR	...
	LMP	There's the Dipper and the two pointing stars. They're right like this. Polaris is down there, somewhere.
	SC	...
		(Music)
11 16 10 23	LMP	Where are your patches and flags, Ron?
	CMP	We ought to figure out a ... job.
	SC	...
	CMP	Crawl around on the floor down here and see if I can find it.
	LMP	We could put them right there.
	CMP	They'd blow off (laughter).
	LMP	Captain America!
	MS	(Laughter)
	LMP	Is it a bird? Is it a plane? No.
	CDR	You know, you might do that joke when ... Make it real short. Maybe you ought to ... Maybe you've heard me tell it, I don't know. Get in that old plane and play around with a balloon and all sorts of ... got from the Moon. ... Run into the head and lift up the seat ... I'll look back and say, "Oh, my gosh, is that ... Doctor, quick, quick, com here! Come here!" You got to ... tells the doctor what's wrong and ... No, no ... you got to come here ... She came in there and ... Come over here quick and look. So she lifts up the lid and he looks. Where is it? He looks down in there again ... poking around ... Wow! Where'd you get that? (Laughter) So he puts the lid down, and he says, "Oh, my gosh, lady." She says, "What - what's wrong with me?" He says,

[redacted]

"No, nothing." "You're all right," he says. "Now don't tell anyone this because it's not confirmed, but I think you and I are the first two people in the world to be a part of it."

MS (Laughter)

CMP Oh, boy.

LMP No, you hadn't told me that one.

11 16 12 45 CDR Do a neat job. No, you want to keep the name on that - -

CMP Yes, I want to keep the name on the suit. I can tape over it, if you want me to.

CDR Well, we'll take it off.

CMP Why don't we just tape around it?

LMP You want this trimmed, don't you?

CMP Yes - I - Yes, you can trim that.

LMP I can cut it, but I won't have anything to mount it with.

CMP Yes.

11 16 13 06 LMP Put tape around it. Hold it while I tape around it.

SC ...

LMP Okay.

CMP I need the flag.

LMP Is that okay?

CDR No, I'm keeping the flag ...

LMP Sure you got all the stripes and everything?

CMP It doesn't look ...

[redacted]

	CDR	Here, get out of the way and we'll see if we can find a place around here. Wouldn't - couldn't we - if we all sort of get down in there, the three of us get together there, maybe we can put it in a place like this. ... Then, we'll know it will always be there.
11 16 14 04	LMP	Well, we really need to get the camera out, I guess. Yes, let me - -
	CDR	Get the camera out; let's take a look at it.
	CMP	I'll get the camera out. I'll do a temporary tape job here.
	CDR	You could put the flag right over the top of it. We could do that, and then, they'll always sort of be there if ...
	LMP	Somebody will think we're advertising that new movie, a sequel to "Shaft," called "Trunnion" (laughter).
	SC	...
	CDR	Temporary.
	CDR	Did you get your sensors fixed, Ron?
	CMP	...
	CDR	They haven't said anything, have they?
	SC	...
	CDR	There aren't any around here.
	SC	...
	SC	...
11 16 15 43	CDR	Okay; those look great.
	LMP	We'll look at it.
	CDR	Yes, let's look at it.

[redacted]

	LMP	What Gene said over the VERB-NOUN list. Better yet, maybe - -
	CDR	...
	LMP	- - we better put it with the ... alarm (laughter).
	CDR	Hey, listen. I - I didn't want to take any chances. I - I - I'm a little superstitious. I got that last one on purpose (laughter). I didn't want anything to change for TEI.
	LMP	A fine point.
	CMP	Yes, it would (laughter).
	LMP	That's a data point. ... (laughter).
11 16 16 30	CMP	Houston, America. Okay, Bob. I've kind of fiddled around with the sensors, now. Are they working okay now?
	SC	...
	SC	...
	CMP	Okay. Good enough.
	CDR	It doesn't make any difference what - what's ... get the picture lined up.
	CDR	No, I'm ...
	CMP	Yes. Got it?
	SC	...
	CDR	The light is up near the front.
	CMP	Ought to be bright ...
	CDR	We need the - Ron - the ...
	CMP	...
	CDR	Oh, you gave it to me. Did you give it to me?

[redacted]

	CMP	Well, you might find ...
	CDR	Here it is.
	LMP	...
	CDR	A what?
	LMP	Short circuited. Check your ..., Gene.
	CDR	I don't think I ended up with it.
	SC	... here.
11 16 19 30	CDR	Oh? No.
	CMP	What could be short circuited?
	SC	All right.
	LMP	Well, let's see; let me get our ...
	CMP	Well, one says ... The other one just ...
	SC	...
	CDR	Maybe we can just tape it.
	CMP	Oh. Yes. Yes.
	CDR	Why don't we just tape it right there?
	SC	...
	LMP	Why don't we - Yes, that's ...
	CDR	Well, this may be high ... be down at the same level the camera will be.
11 16 21 01	LMP	All right; let's try it.
	CDR	...
	LMP	Okay. All we have to do is turn it on, I think. We don't want to do that, don't want to do that.
	SC	...

[redacted]

	LMP	Huh?
	SC	...
	CDR	You mean average?
	LMP	You got to have it ...
	CDR	Oh, yes. You'd better talk to the ground. They don't know ... Stand by.
	LMP	Stand by? Then you don't go to ground with it. You want to go to ...
	CDR	Okay. You got to have their permission first.
	LMP	Well, let's check it. I don't want to ruin whatever the ground's doing.
	CDR	Yes.
11 16 22 20	LMP	TV operations.
	CDR	Yes. You're right. Yes.
	SC	You haven't ... scientific ... scientific to get ...
	SC	...
	SC	...
	LMP	Why don't we - Say, Houston; 17.
	CC	Go ahead, 17.
	LMP	Yes, we'd like to run a check here on this TV set-up. Are we going to disturb you if we go to TV on the S-BAND AUX switch?
	CC	Stand by on that. Let me check with OSO.
	LMP	Boy, it sure would help. And, Bob, if it is an inconvenience, could you look ahead and find a time when we could have 10 or 15 minutes, if possible, to work this out?

[redacted]

11 16 23 44	CC	Roger.
	SC	...
	SC	...
	CMP	... fruitcake.
	LMP	Where's that tape? ... What'd I do with it?
	CMP	With what?
	LMP	Well, I just had it a minute ago, then I ...
	SC	...
	LMP	I can't figure out ...
	LMP	How does that look? That look all right?
	CMP	Looks like it's going to work pretty good.
	LMP	That about right?
	CMP	...
	LMP	Huh?
	CMP	Yes, it looks good to me.
11 16 26 45	LMP	... any tape here ...

# # #

[redacted]

(This page Unclassified)

Tape 17-03452

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 19 07 02	11 19 16 54
11 19 35 00	11 19 59 41

Time good, voice fair.

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[redacted]

11 19 07 02	CDR	Your ... angles now, Jack, plus 30 and 190.
	LMP	They're there. Minus - -
	CDR	No, plus 30.
	LMP	Plus 30, minus - Right.
	LMP	And minus what?
	CDR	190.
	LMP	190?
	LMP	Probably ought to pick these things out of the spacecraft. ... These - these here. Think we ought to take them somewhere and ... - -
	CDR	Yes, let's put them on ...
	LMP	- - see what would happen. ...
	LMP	...
	CDR	Tell you what, rather than keep them here, I'm going to have to take some of this stuff out of the Flight Plan, anyway. I'd better put them here. ...
	CDR	Got any more?
	CMP	... Here it is.
	CDR	Huh?
	CMP	Three or four of them?
	CDR	Yes, they're multiples.
	LMP	(Singing) "brave dare not go - to follow that star, no matter how hopeless, no matter how far - to fight."
	LMP	Where's the time on this?
	SC	...

[redacted]

	LMP	(Singing)
	LMP	(Cough) (Laughter) (Singing)
	LMP	Put your mouth over it; see if you light up (laughter).
	CC	..., Houston. We'd like to throw a few switches on panel 230 and try to get the HF antennas retracted. Over.
	LMP	Okay. Go ahead.
	CC	First of all, RADAR, OFF.
	SC	(Singing)
11 19 15 15	LMP	Okay, Gordy, the RADAR is OFF.
	CC	Okay, ... HF ANTENNA ... RETRACT. ... give us a mark, please. It should take about - oh, at least a minute.
	LMP	Okay - okay, going to RETRACT -
11 19 15 31	LMP	MARK it. Oh, HF-2? Gordy, I started 1. I'm sorry.
	CC	... all right. Keep it. It doesn't matter; just keep working on 1 there. Keep it in RETRACT.
	LMP	Okay, it's in RETRACT and stayed there.
	LMP	... let the old master. Don't use 1 first until you get to me again.
	LMP	What did you say? Huh?
	CDR	That was me.
	CMP	These two on the bottom here ... got these up at the top, and on - -
	LMP	Did you give me a battery a minute ago?
	CMP	... one of the batteries ...

[redacted]

	CDR	Let me know when you're ready.
	LMP	Huh?
11 19 16 54	CMP	Wait a minute. Okay. (Laughter)

TIME SKIP

[redacted]

11 19 35 00	CMP	... watching where that Sun is, you know what I mean?
	CDR	...?
	CMP	Yes. You got a little ... in your ...
11 19 35 08	LMP	Gordy, it's OPEN.
	CC	Thank you.
	LMP	Doesn't it bother you to wield such power, Gordy?
	CC	... - -
	CDR	I'll give you one of mine if you want one.
	CC	- - ... accustomed to it.
	CMP	No, I've got one (laughter).
	CDR	I've got a lot of them. I'm not going to use them, though.
	CMP	I'm not either. I've got a lot of them, too, but I haven't got anything ...
	CDR	No, Ron, you lost your towel (laughter).
	CMP	... rather scratchy. I don't see a thing, either. That's what bothers me.
	CDR	...
	CMP	Well, guess I'll do it.
	LMP	OMNI Delta, when they need it, is their strong one.
	CMP	What?
	LMP	OMNI Delta when they need it ... strong one.
	CMP	Okay.
	SC	(Music)

[redacted]

	CMP	...
	LMP	Huh?
	CMP	That way I won't have to take one in the morning.
11 19 36 31	LMP	What?
	CMP	Defecate (laughter).
	LMP	What do you say we go into the Challenger? (Laughter)
	CMP	So here I am, trying to convince myself I ought to - I ought to not take one to keep everything as clean and smelling nice as I can, and you're sitting there telling me you're ...
	CDR	Well, you're probably right. Better to take one tonight than tomorrow. I may end up having to anyway.
	CDR	Clean off my screen here while I'm at it. So I can get maximum air circulation.
	CMP	Aaaah.
	LMP	Those ... will sure work.
	CDR	Keep you from defecating, ties up your stomach (laughter).
	SC	(Laughter)
	CDR	I think I'm going to ask for a private conference and see what else they can recommend for you (laughter).
11 19 38 06	CMP	Right. (Laughter) Does wonders.
	LMP	Surprised they didn't comment on my having taking one. There it is! The Earth!
	MS	Where?
	CDR	Every - By golly, it is.

[redacted]

	CMP	You know, this is getting to be a - -
	CDR	That's just a big crescent Earth, I'll tell you.
	LMP	Yes, sir.
	LMP	Gordy, for the first time in seemingly several days, we see the Earth.
	SC	(Laughter)
	CDR	Would you like to - -
	LMP	Afraid I don't know whether or not there's any weather down there.
	CDR	Well, where did it go? We still maneuvering? There ...
	CC	... can't see ...
11 19 39 03	LMP	No, sir. You're down to a fingernail, if you'll pardon the expression. It - Oh, let's see - it's about a - What do you think, Gene? About a one-eighth Earth - one-sixth to one-eighth Earth?
	CMP	...
	CDR	Hey, look at - -
	CMP	No, ...
	LMP	Got a picture of Ron (laughter). You can see it later (laughter).
	CDR	We're orbiting to go around ...
	CDR	You're looking at the Pacific, ... and - because it's 5 o'clock in Los Angeles. And that's what you're looking at - the terminator in Los Angeles.
	LMP	... on the map there?
	CDR	Well, that's a little bit of both, yes.
	CMP	...

[redacted]

	CDR	Well, where else could the Sun be going down at 5 o'clock on the face of the globe except one spot?
11 19 41 27	LMP	Yes, we've been looking at - we've been looking at sunset all along, not sunrise.
	CMP	...
	LMP	I think you're seeing the airglow.
	CDR	Yes. ... have that on the ...
	LMP	I think I ought to ... or something.
	CDR	Our destination.
	CMP	...
	LMP	Huh?
	CMP	...
	LMP	Hey, gang, do we have any film?
	CDR	Want a mag?
	LMP	Why don't you dig it out, Ron?
	CDR	Think we ought to have a picture of the Earth, Ron? ...
	CMP	...
	LMP	You have anything?
	CMP	...
	LMP	Yes. Ron, I think it's one ...
	CMP	Okay.
	LMP	Did we do them all?
	CDR	How could we do them all from ...?

[redacted]

	CDR	Did we pressurize that at all?
	LMP	I don't think so. Pressurize what?
	CDR	The hatch.
	CMP	Well, we do sometimes. We have super ...
	CDR	Can you get the ... millimeter?
	LMP	Yes, I can get that. It's over in the -
	CMP	...
	LMP	Is that ...?
	CMP	...
	CDR	We're supposed to maneuver here, so we'd better do that.
	LMP	Why don't you let me stow that ... (laughter).
	CDR	You know how - what - -
11 19 45 51	LMP	I don't see it in here, Ron.
	CMP	You ...
	LMP	Oh, yes. I see. Yes, I'm - 35?
	CMP	...
	CDR	Who's got the biomed on? Ron?
	CMP	... I had it on.
	CDR	Hello, Houston; America.
	CC	...
	CDR	Hey, Gordo, 286:52 on the Flight Plan and at 287:40 - Is there an update on - on that? CMP put his biomed harness on - oh, I guess 4 to 6 hours ago.

[redacted]

	CC	Yes, let me check on that. ... something on this when I left last night, but ... get the latest here.
	CDR	Okay. Huh?
	CMP	... on me?
11 19 47 23	CDR	Well, they changed my name out for yours, see? And then what we do tomorrow, the other - other two guys put it on.
	CMP	...
	CDR	Yes, yes.
	CMP	... we ..., huh?
	CDR	...
	CMP	Okay.
	LMP	Well, we'll try it again. Darn it.
	CDR	Go ahead, ... then all off all at once.
	LMP	No, ...
	LMP	...?
	LMP	I'll take care of them.
	CMP	You ... - -
	LMP	No, not ..., just one of them. You can always ... take one of them.
	CDR	Take our red ones or your orange ones, if you don't care.
	CMP	Which one do you want?
	CDR	You - you open it. You take one.
	CMP	Which one do you want? Huh?

[redacted]

	CDR	... three. Okay, I - got an orange one.
	LMP	They're like Chiclets?
	CMP	Well, they're sticky.
	SC	... the first one.
	CMP	...
	CDR	... my omni ... here.
	CMP	... omni ...
	LMP	... We'll do that.
	CMP	...
	LMP	...
11 19 52 48	CDR	I left it on there, but ... also. I left it on there.
	CMP	...
	CDR	But that bracket don't come off there.
	CMP	... Houston at ...?
	CDR	No, ...
	LMP	Boy, are we going in our private loop. Gordy's been gone for 10 minutes.
11 19 54 28	CC	America, we're ready now for ... MODE, FREE and AUTO. VERB 48, VERB 49, ... On the biomed, we're going to leave it up to you. Whoever - draw straws or whatever - whoever you decide to wear the biomed tonight, ... your choice.
	CDR	That's easy, Jack and I will put it on in the morning. How's that?
	CC	...

[redacted]

	LMP	Yes, they know that.
	CDR	He has the option to take it off if he wants to ... - -
	CMP	You - get to watch ... America tonight then.
	CDR	I think it's only fitting that they watch Captain America.
	CMP	(Laughter)
	SC	(Cough)
	CDR	HIGH GAIN, when we get there, Jack, will be minus 37 and 48. They're getting easy down there.
	SC	(Cough)
11 19 56 21	CDR	Maybe they're not on tonight.
	CDR	Let's see. There's something that we haven't played, isn't there?
	LMP	Here's something that we haven't played.
	CDR	What?
	LMP	Is that one of his we haven't played?
	CMP	Now, that one -
	LMP	Yes, how many - how many of them are in there of his? Is there a lot of them in there?
	SC	(Cough)
	LMP	I'm ready for almost anything.
	CMP	Just look at it. (Laughter) Yes.
11 19 57 38	CC	... Houston. We'd like OMNI Alfa.
	LMP	Are you bouncing that off the wall and catching it?
	CDR	...

[redacted]

	CDR	... must have taken ... off.
	CDR	They must have taken the anti ... off. None left. Put the bag in there first.
11 19 59 41	CC	America, Houston. We can take the high gain now that you're there.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03453

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 20 39 33	11 20 43 46
11 20 56 00	11 21 04 03
11 21 16 39	11 21 20 59
11 21 53 29	11 22 01 25

Time good; voice poor.

SECURITY CLASSIFICATION

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GROUP 4
Downgraded at 3-year intervals; declassified after 12 years

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

[redacted]

11 20 39 33	LMP	Sure?
	CMP	Why don't we ...
	CDR	I'm not sure I can do that, Ron. I'd like to, I think, but I'm not sure I can.
	CMP	Well, how can you ...?
	LMP	... my ...
	CDR	How about a nice hot shower for y'all?
	LMP	No, I don't want ...
	CMP	We haven't been up that long.
	CDR	... the bags? ... on? ...
	CDR	Okay.
	LMP	... don't know what I'm going to do when I'm ...
11 20 43 46	CDR	Hey, let's ... going.

TIME SKIP

[redacted]

11 20 56 00	LMP	... in the lab could see their crew ... be very ...
	CMP	... no ...
	CMP	Do you still ... head off? (Laughter) I mean -
	CMP	That reminds me of ...
	LMP	... like a ...
	CMP	Oh, that was good for you.
	LMP	That was - -
	CMP	... No, it was before we ...
	CMP	Yes.
	LMP	...
	CMP	Yes.
	SC	(Music)
	LMP	Yes, everything. (Cough)
	LMP	Does help.
	CDR	It's all there behind you. In that box. Is it empty?
	SC	Next one's on the - on the ...
	LMP	... be there to ... (Laughter)
	CDR	...
	CMP	I already talked to him once.
	CDR	... supposed to be ... - -
	CMP	Right here?
	CDR	...
	CMP	Yes.

[redacted]

	CDR	...
	CMP	Okay.
	CDR	...
11 21 04 03	CMP	Houston, America. How's the - CMP's in biomed.

TIME SKIP

[redacted].

11 21 16 39	CDR	...? That can't be ... a long time.
	LMP	... Yes.
	CMP	Well, I'll let it go this time.
	CDR	Oh, 3 and 30 seconds.
	CMP	Bring mine up ...
11 21 19 39	CMP	Okay, we'll torque at 59:45.
11 21 20 29	CMP	Okay, we'll stop it on 146 roll.
	CDR	...? 46?
	CMP	No, 146. 146.
	CDR	We got a canister yet to unstow. I'll put that on this page.
11 21 20 59	CMP	All right.

TIME SKIP

11 21 53 29	CDR	Hey, Bobby McGee?
	LMP	... that.
	CMP	(Laughter) What are you ... (laughter) ... moving ...? Here.
	CDR	How'd you ... pick all those ...?
	CMP	(Laughter)
	LMP	You guys will probably be ...
	CMP	(Laughter)
	LMP	I don't know how these ... - -
	CMP	(Laughter)
	LMP	- - ... - -
	CMP/CDR	(Laughter)
	LMP	... is almost exactly the right material ... - -
	CMP	Yes (laughter).
	LMP	It has the grip. Ever seen a ...?
	CMP	(Laughter) Yes (laughter).
	CDR	I finally took a mouthful. You can't do it in the back.
	CMP	(Laughter) Thought you might ... (Laughter)
	CDR	Oh, I ...
	CDR	Who wants the peach ambrosia already?
	CMP	I got mine. I'm going to have ...
	LMP	... Pretty good. You're right. ... solidified ...
	CMP	I don't know how mine got solidified. Might have been a ...

[redacted]

	CDR	Right. Shouldn't ...
	CDR	... at ... right now.
	CMP	Yes?
	CDR	... - -
	CMP	This one?
	CDR	...
	CMP	Bet it is, really.
	CMP	It's all gone.
	CDR	... all that we can. ... - -
	LMP	Pass me a graham cracker. Got a graham cracker cube?
	SC	(Music)
	CDR	Sure is ... What is this one?
	CMP	I think that's ... meal ... or whatever ... you want ... Piece of cake? ...?
	LMP	Yes.
	CMP	Okay, ... coming down right here.
	CDR	I think we've got - All this other is a lot more than you can do ... I - I - I - I think that's it. I think you get up to a point where all of a sudden, your - your body decides you don't want any more. And that puts it all in your intestines. And that draws all the water out of your body. ...
11 21 59 27	CMP	I think ... as good as any. How does the - just because the salt's down there - seems like that would dry it out.
	LMP	No, it - You have - -
	CMP	Oh - -

[redacted]

	LMP	- - You tend to - tend to try to balance the salt concentration. You get a high salt ... all water ...
	CMP	Oh, okay.
	LMP	You try to reach equilibrium. I don't know - the membranes, but in all these ... membranes, you get this concentration of salt.
	CMP	Uh-huh.
	LMP	That's through your intestines. That's why - that's why epsom salts come right ...
	CMP	Oh, I see, I see. You don't put the salt - -
	LMP	... dissolves the water out - -
	CMP	- - dissolves the water - -
	LMP	- - of your body, and the whole thing is ...
	CMP	... Whole ..., huh? They say the way to eat these things is to cut them. Do you know?
	CDR	That's the way I've been doing it.
	CMP	I've got an extra amount of water in this thing.
	CDR	Don't squeeze it when you cut it, then.
	CMP	(Laughter) Okay.
	CDR	...
11 22 00 38	CMP	Well, the cold water never has had too much, I don't think. Course we never use the cold water in that gas separator, because we always like to have hot water.
	CDR	... you got that gas separator on backwards.
	CMP	(Laughter) Yes, maybe it is. No everybody said that she was pretty ... about it. No way. ...

[redacted]

	CDR	Are you - are you ...?
	CMP	Uh-huh.
11 22 01 25	CDR	Well, I'm sorry I made that ... You want two ambrosias? (Laughter)

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03454

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

DUMPED OVER GDS DURING TRANSEARTH COAST

Time Segments (AET)

From	To
11 22 18 10	11 22 19 39
11 22 35 03	11 22 42 01
11 22 54 09	11 23 02 08
11 23 14 22	11 23 23 43
11 23 35 30	11 23 42 51
11 23 54 55	12 00 02 16

Voice fair to poor; time good.

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[redacted]

11 22 18 10	CMP	What ...? (Music)
	SC	Told you.
	CMP	Yes, ... Well, I'm still not.
	SC	... talk about ...
11 22 19 39	CMP	EVA.

TIME SKIP

[redacted]

11 22 35 03	LMP	Yes. I think stable 1.
	CMP	It might be.
	CDR	...
	CMP	Yes.
	CDR	Okay, ... small jet bag.
	CMP	... put the weight on there. You have the weight.
	SC	...
	SC	Yes.
	CMP	... about half ... about like it ought to be.
	CDR	... got a ... in it? What's the ...
	CMP	I'd say 25 pounds total.
	LMP	Ron, your pan camera.
11 22 38 37	CDR	Hello, Houston; America.
	CDR	Gordy, we're just - finishing chow and doing a little cleaning up, and I'm doublechecking the stowage and so forth. But we do have a minute. Is there, by any chance, any late news? Anything going on today that might be of interest?
	CC	Okay. I haven't heard of anything. ... this morning? Is that correct?
	CDR	Yes, we sure did.
	CC	Okay, I'll see if there's ... couple of minutes.
	CDR	Okay. How's the Houston weather today?
	CC	It was overcast but warmer. Kind of standard winter weather for around here. Not nearly so frigid as it has been the last couple of days.
11 22 39 27	CDR	Okeydoke.

[redacted]

	CDR	Put me a little of that toothpaste, will you, Ron?
	CDR	How about if I ...
11 22 42 01	CMP	... report it to the - to the - -

TIME SKIP

[redacted]

11 22 54 09	SC	Okay.
	CDR	Okay, Gordo; the entry stowage will be as - as in the Flight Plan Supplement, with the exception that there is a - a small LM jettison bag, max weight of about 25 pounds, which will be - which is already, as a matter of fact, packed in A-7. And the presently used jettison bag weight really isn't very much at all; that's just housekeeping trash and so forth. We will tie between A-2 and A-3 and there's probably not, at the most, more than 5 pounds there.
	CMP	Except the LEVAs ...
	CDR	And right now we haven't seen any specific spot to tie down the LEVAs. If you've got a recommendation, we'll take it. If not, we'll just pick a spot down in the LEB area to tie them down.
	CC	Okay, I'll see if we have a plan for that.
	CDR	There are actually two LEVAs and a helmet bag.
	CDR	It says PGA bag but - -
	SC	(Laughter)
	CDR	Yes.
	CDR	I moved down about 1 degree now. What are you looking at? Moon?
	CDR	How's the sextant - Oh, you can't look through it, that's right.
	CDR	You get the Earth coming around the other side?
	CMP	Yes.
11 22 57 56	CMP	I never did ... one, but the window. Oh, I see. That might ...
	CDR	Man, you look like a new man. Put some of it in that - that stuff in the med kit, that very light

[redacted]

cream in the little bottle. I think that's better - well, ... Yes, except they call it a first-aid cream. Either that or it's - I like that better than I do the ... stuff in here.

LMP Ron, I tell you. Let me see. I think you're a genius. I don't think you can grow hair in one g, but if you stand on your head ... (Laughter) If you stand on your head, you could probably grow it. I think you got one of those nice round heads. No wonder women like you.

CMP Look at ...

SC (Laughter)

LMP ... like you're naked out there in breeze. Shoot, bald-headed men turn me on.

CMP (Laughter) I didn't do too bad.

LMP Here. ... Get over there.

CMP Okay.

11 22 59 08 LMP Get over there. Oh, Ken Mattingly - -

CMP (Laughter) Wait a minute. Wait.

CDR You coming my way?

CMP Yes, ... (Laughter)

SC I'll hold it ...

CMP I think - I can get - wait a minute ...

CMP (Laughter)

CDR ...

SC ...

LMP Does this taste like mint?

CMP No, ...

[redacted]

	LMP	Good.
	CMP	I think ...
	SC	...
11 23 02 08	CMP	Thank you.

TIME SKIP

[redacted]

11 23 14 22	CMP	(Humming)
	CMP	...
	CDR	Huh?
	LMP	Give me that coin thing ...
	CMP	...
	LMP	That's where you put it the other day. I've just been putting it there ever since. ... You're the one who put it there.
	CMP	...
	LMP	I don't know where it goes. Where does it go?
	SC	...
	CDR	Huh? ...
	CMP	...
11 23 16 03	CDR	... I've got one.
	LMP	... one more ...
	CMP	(Laughter)
	CDR	Okay, Houston. America's listening.
	CDR	Georgia Tech's leading Iowa State 31 to 24 in the fourth quarter, Liberty Bowl.
	MS	(Laughter)
	CDR	Fastie says there's no atmosphere, no out gassing on the Moon. He has it as only 1 percent of the expected predicted hydrogen.
	CDR	Truman - Truman's unchanged.
11 23 19 02	CDR	Population growth is decreasing.
	CDR	A guy built a private flying machine.

[redacted]

	MS	(Laughter)
	LMP	Merry Christmas.
	CDR	Thank you for the news, Gordo. That's a very - a very enjoyable evening to go to bed with on our final night of the flight.
11 23 23 43	LMP	I hope you wrote that down.

TIME SKIP

[redacted]

11 23 35 30	LMP	... getting cruddy all the time.
	CMP	Are you going to be ...?
	CDR	... one type ...
	LMP	...
	CMP	(Humming)
	SC	Huh?
	SC	...
	LMP	Either that or I need a ...
	CDR	Yes. I ...
	LMP	I don't know how your ... got down there.
	CMP	I don't see ... got any ...
	LMP	Okay, how do you read?
	CMP	Loud and clear.
	LMP	Okay.
	CMP	Yours pretty good?
11 23 37 27	LMP	Yes. It seems to be all right. Just a little tight, but I can fix that.
	LMP	Okay.
	CDR	... headband ... a little more.
	CMP	I think the headband ... Yes. Yes. If you do that, you want to cut that ... on the LEVA.
	LMP	We have to get in here anymore for anything?
	CDR	Yes. We got to get in there ... that coolant control.
	CMP	Yes.

[redacted]

	CMP	... right.
	CMP	You want me to ... there, Gene?
	CDR	Huh? Can you stow them? ...
	LMP	There you go ... over my old ... Thank you.
	CMP	Okay, one more time and you ... it.
	CDR	Ron, I tell you, you have been the only problem we've had in this flight.
	CMP	(Laughter) That's right. My comm carrier.
	CDR	Comm carrier, scissors, articles.
	CDR	Well, shoot.
	CMP	... do that?
	CDR	No, I've got it.
	LMP	... CABIN REGs are BOTH.
	CDR	... go that way, if you would.
	CMP	...
	SC	Yes.
11 23 41 26	CMP	I doubt if it would mean anything to you.
	CDR	I think ... off ...
	SC	Yes. ... 80 ...
	CDR	...
	CMP	... be three ...
11 23 42 51	CDR	I'm getting a ...

TIME SKIP

[redacted]

11 23 54 55	CDR	... take that ... off the bottom ...
	CMP	...
	CDR	... take it off ...
	CMP	...
	CDR	Huh?
	CMP	...
	CDR	... preentry - final preentry stowage check calls for it to be on.
	CMP	... over that thing ...
	CDR	... calls for the ... - on the ... to be on.
	CDR	Here you go, Ron.
	CMP	Hey, Gene?
	CDR	Yes?
	CMP	Come to think about it, all you got to really have is that ATG up there ...
	CDR	All right.
	LMP	... we have a lot of stuff ...
	CMP	... right down on the bottom there's a little ...
	CDR	...
	CMP	...
	CDR	... little more ...
	LMP	I'd rather ... stable 2 or something ... anyhow.
	LMP	We are chlorinated and stowed on ...
11 23 58 33	CMP	Chlorinated for the last time ... bags we can ...
	CDR	Okay, now who needs help?

[redacted]

	CMP	I think we're in mighty good shape.
	LMP	... You might look at the LEB DSKY ...
	CDR	... off on the ...
	CDR	Houston, America.
	CDR	We bid you hello, Bob; and at the same, good night.
	CDR	Well, we thought we'd give you about 8 hours to think about it.
	CDR	See you in the morning, babe.
	CMP	Okay.
	SC	... down there in the ...
	CMP	Let's see, I can ...
	SC	Yes.
	SC	Let me check. Yes, I'm ...
12 00 02 16	CMP	... which is about 11:30 ... what time I'm going to ... okay.

# # #

[redacted]

[redacted]

(This page Unclassified)

Tape 17-03471

APOLLO 17 MISSION

APOLLO DSE CM VOICE DUMP TRANSCRIPTION

CARRIED TO SPLASHDOWN

Time Segments (AET)

From	To
12 13 07 26	12 13 51 43

Time and voice good.

SECURITY CLASSIFICATION

The material contained herein has been transcribed into a working paper in order to facilitate review by interested MSC elements. This document, or portions thereof, may be declassified subject to the following guidelines:

Portions of this document will be classified CONFIDENTIAL, Group 4, to the extent that they: (1) define quantitative performance characteristics of the Apollo Spacecraft, (2) detail critical performance characteristics of Apollo crew systems and equipment, (3) provide technical details of significant launch vehicle malfunctions in actual flight or reveal actual launch trajectory data, (4) reveal medical data on flight crew members which can be considered privileged data, or (5) reveal other data which can be individually determined to require classification under the authority of the Apollo Program Security Classification Guide, SCG-11, Rev. 1, 1/1/66.

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[redacted]

12 13 07 26	CC	America, Houston. The batteries are on line, and they look good to us.
12 13 07 31	LMP	Okay, and the tape recorder's ON here.
	CMP	Okay.
12 13 08 19	CDR	01:37.
12 13 08 43	CDR	Okay, let's start the sep ... - -
	CMP	Okay, let's start sep - sep checklist here.
12 13 08 47	CDR	Okay, Houston, we're pressing ahead here about 5 minutes early.
	CDR	Okay, circuit breaker ELS/CM ... - -
	SC	Sep prep.
	CC	Roger.
	CDR	- - ... CLOSE.
12 13 08 56	CMP	Okay, ELS/CSM [sic] SEP BAT A, BAT B, CLOSED.
	CDR	Okay, you got those good ... for ... launch.
	CMP	Yes.
	CDR	Okay. PRIMARY GLYCOL to RAD, PULL TO BYPASS.
12 13 09 07	CMP	Okay, I'll BYPASS the old PRIMARY RADIATORS.
	CDR	REPRESS PACKAGE FILL to 865-935, then - -
	CMP	Okay - -
	CDR	- - then ON.
12 13 09 19	CMP	Okay, REPRESS PACKAGE valve is going ON.
	CDR	O-N, right?
	CMP	O-N.
	CDR	Okay. O_2 service module supply, OFF.

[redacted]

12 13 09 26	CMP	Okay, we'll cut off the service module supply of oxygen.
	CDR	Okay, ...
12 13 09 35	CMP	Okay, SURGE TANK is verified ON.
	CDR	CABIN PRESSURE RELIEF VALVE ***
12 13 09 41	CMP	Okay, PRESSURE RELIEF valves are verified NORMAL.
	CDR	Okay, ABORT SYSTEM PROPELLANT ***
12 13 09 48	CMP	Okay, we're verified in RCS COMMAND.
	CDR	Okay, SERVICE MODULE RCS secondary fuel ***
12 13 09 56	CMP	Okay. SECONDARY FUEL. That's A's, B's, C's, and D's; all OPEN.
12 13 10 09	CDR	Okay. VHF AM A and B, OFF, center.
	LMP	They're OFF.
12 13 10 10	CMP	VHF is OFF.
	CDR	HIGH GAIN POWER, OFF.
12 13 10 13	LMP	POWER's OFF.
	CDR	FUEL CELL PUMPs, three of them, OFF.
12 13 10 19	LMP	Okay, PUMPs are coming OFF; 1, 2, 3.
	CDR	Okay. FUEL CELL 2 MAIN A, OFF.
12 13 10 30	LMP	Okay, 2 MAIN A's OFF.
	CDR	Okay, verify the loads are balanced.
12 13 10 36	LMP	Look good; couple amps. Houston, the loads appear to be balanced on MAIN A, MAIN B fuel cells.
	CC	Roger, Jack. We copy that.

[redacted]

	CDR	Okay, on your side. Circuit breakers, ECS RAD CONTROL HEATER, two of them OPEN.
12 13 10 54	LMP	Okay. CONTROL HEATERs, 1, 2.
	CDR	Circuit breakers, RAD HEATERS OVERLOAD, two of them, OPEN.
12 13 11 01	LMP	HEATERS OVERLOAD, 1, 2.
	CDR	Okay. WASTE WATER/URINE DUMP HEATERS, OFF.
12 13 11 07	LMP	WASTE WATER/URINE DUMP HEATER - -
	CDR	Correction. Circuit breakers, WASTE WATER/URINE DUMP HEATER - -
12 13 11 11	LMP	- - OPEN.
	CDR	- - open.
12 13 11 14	LMP	Okay. And they're open.
	CDR	Okay. POTABLE WATER HEATER, OFF.
12 13 11 18	LMP	Okay, it's OFF.
	CDR	Okay, GLYCOL EVAP TEMP IN to MANUAL.
12 13 11 24	LMP	It's MANUAL.
	CDR	Okay, Ron, you've got about 10 minutes to your horizon check.
	CMP	Okay. Don't see anything yet.
	LMP	Houston, step 5 on 2-2 is complete.
	CC	Roger, America.
	LMP	Or (5), I guess it is.
	CDR	Stand by here for just a little bit.
	CMP	Okay.

[redacted]

	CDR	You don't want to go into 61 too much so we'll - -
	CMP	No. We don't want to go into - -
	CDR	So we'll stand by.
	CMP	I don't think you're going to see the horizon anyhow. You might.
	CDR	That depends on where that Sun - when that Sun goes down. Moonset is at 16, so you may - you may see horizon.
	CDR	Behind window? Won't be a bit surprised if we see it.
	CMP	Might.
	CDR	I'll take P61 just before the horizon.
	CC	America, Houston. You may be interested. We've just taken another look at your last batch of data, and it confirms your pad. You are absolutely nominal, right on the pad.
	CDR	Good news, Robert. Thank you.
	CMP	Outstanding.
	CC	We aim to please.
	CDR	Okay, and we're going to keep it nominal.
12 13 15 24	CDR	Go into P64 - or P61 at - at just prior to 40. That'll give us - that'll be just about right.
	CMP	Okay, that'll be all right. It'll be a little bit different, but that'll do it.
	CDR	Different than what?
	CMP	Than what the pad is, probably. Well, not much - -
	CDR	- - ... And there's no ... time here at all.

[redacted]

	CDR	When normally do you - do we go in? I think we're - right in here, anywhere in here is where we go in.
	CMP	Yes. Anywhere in there.
	CDR	Yes, I want to be here.
	CMP	Yes.
	CDR	I want to be down to 62 by 43.
	CMP	By 43.
	CDR	And I want to verify these numbers.
	CMP	Yes.
	CDR	I'll probably go in about 39.
	CDR	Want a drink of water?
	CMP	Yes.
12 13 16 39	CDR	Be sure we lock this.
	CMP	Yes, it'll lock it. Fit the lock in.
	CMP	Getting cold in here.
	CDR	Um-hmm.
	CMP	It won't be for long, probably.
	CDR	Want some?
	LMP	Thank you.
	LMP	Gosh, look at that signal strength - on that omni. Close.
	LMP	Here you go.
12 13 17 38	CDR	Stand by. Ready to go on that 61. Ready?

[redacted]

	CDR	Okay. Lat is minus 1788, 163, and lift vector up. Okay. I like all that. Okay. G_{MAX} is 7.02. Wait a minute - that might - that's all right. That's a little ... - -
	CMP	That's okay. We'll - we're a little bit early.
	CDR	That's okay; 36, 6079, and minus 657. Okay? Okay. Okay, NOUN 63 says range to go is 10,604, went in just a sukosh early; 36, 165; yes. Just a sukosh early. Okay?
	CMP	Okay.
	CDR	And that's from .05 G and that looks good.
	CDR	Okay, we're happy with those numbers.
	CMP	Yes, they look pretty good.
	CDR	Okay, on 62. I'll wait until you get the horizon.
	CMP	Oh, you can go ahead and go on through there and then I'll -
	CDR	Okay. Okay. MAN ATT RATE - three to RATE COMMAND, verify?
12 13 19 35	CMP	RATE COMMAND.
	CDR	Okay, DEAD BAND, MIN.
12 13 19 40	CMP	DEAD BAND, MIN.
	CDR	RATE, LOW.
12 13 19 42	CMP	RATE, LOW.
	CDR	Correction. RATE, HIGH. RATE, HIGH.
	CMP	Yes, HIGH. Okay, ... that's better.
	CDR	DEAD BAND, MIN; RATE, HIGH.
12 13 19 48	CMP	DEAD BAND, MIN; RATE to HIGH.

[redacted]

	CDR	Okay, SPACECRAFT CONTROL, SCS.
12 13 19 51	CMP	SCS.
	CDR	Okay, next thing is the yaw out of plane, let's wait for your horizon, which comes in about 1 minute.
	CMP	About 1 minute. Okay. Doubt if we'll see it. We might, though.
	CDR	It's getting dark. You may just very well see it, babe.
	CMP	Huh?
	CDR	It's getting dark.
	CMP	... will?
	CDR	Yes.
	LMP	No, I turned the lights down. That's all.
	CDR	Oh. Oh, okay. I thought it was getting (chuckle) I thought it was getting dark in here.
	CDR	Back to an Earth li - Earth - -
	CMP	I got the sun shining right in my left window here.
12 13 20 34	CDR	Got another minute to go; 301:37.
12 13 21 07	CDR	Thirty seconds.
12 13 21 35	CDR	You ought to be seeing it, Ron. Take a look now. 301:37.
	CMP	I don't see anything. Do you see anything, Jack?
	LMP	I don't see a thing.
	CMP	(Chuckle) I knew it.
	LMP	Well, maybe; yes, I do.

[redacted]

CDR You got the horizon?

LMP Yes, I got the horizon's glow. I can see the glow.

CDR See it, Ron?

LMP Yes, it's just ... - -

CDR Look at - look at your 31.7 ... - -

LMP - - ... very dim, very dim glow.

CMP Well, you see, I got too much shine in ...

LMP Yes.

CMP Sun's shining in on here - glaring on the window.

CDR Okay, that's good. We got it.

CMP That's good; as long as it's there somewhere.

CDR Yes, yes.

CMP Oh, I see it. It's off to the left.

CDR Yes. There it is.

CMP Oh, it's out the left window (chuckle).

LMP There it is.

CDR Yes. I got it, too.

CMP Okay, yes. That's a dark horizon though.

CDR Okay, Houston, we've got the horizon. We're yawing out of plane now.

LMP Looks like the ... - -

CDR Okay, let's yaw.

CC Roger.

LMP The Earth's getting pretty big, isn't it?

[redacted]

12 13 22 21	CDR	Okay, Ron, yaw at 45.
	CMP	Okay, I will.
	LMP	Yes, sir; that's getting pretty big, isn't it? Look at it now.
	CDR	Yes.
	CMP	Yes, see. You can see it better when you yaw out of plane. We must be just seeing the horn now.
	LMP	Oh, that's the air glow mainly.
	CMP	Yes, that's the air glow.
	LMP	Full Moon ... - -
	CMP	But, see, that's the horn that's - that we've been seeing all the time.
	CDR	Okay, Jack, you want to verify your MAIN BUS TIES are ON.
12 13 22 49	LMP	Okay. That's verified.
	CDR	Ron, you want to verify your PRIMARY GLYCOL RADIATORS, BYPASS.
12 13 22 53	CMP	Verify BYPASS.
	CDR	EMS MODE, STANDBY. That's verified.
12 13 22 58	CMP	Okay.
	CDR	Okay, ... - -
	CMP	STAND BY. Jack, when we yaw out here, can you get a picture?
	CDR	Oh, shoot!
	LMP	I can try. I can get part of it.

[redacted]

	CDR	Okay. BMAGs, ATT 1/RATE 2. Okay?
12 13 23 17	CMP	Okay, BMAGs, ATT 1 RATE 2. RATE COMMAND, SCS. ... - -
	CDR	Okay, Jack verified the bus ties. Okay, RCS LOGIC, ON.
12 13 23 25	CMP	COMMAND MODULE RCS LOGIC is ON.
	CDR	Okay, SECS LOGIC, up and ON.
12 13 23 31	CMP	SECS LOGIC verified ON.
12 13 23 32	CDR	And SECS ARM, coming up and ON.
12 13 23 34	CMP	Okay, here comes the pyros. PYRO A, PYRO B.
12 13 23 42	CDR	Okay, Houston. On my mark, I am going to hit the CM/SM SEP.
12 13 23 47	CDR	3, 2, 1, -
12 13 23 50	CDR	MARK it. We got it.
	CMP	Oh, ho! Did we get it! That thing really bangs, doesn't it?
12 13 23 55	CDR	Okay, TRANSFER, COMMAND MODULE? You got thr - You got it?
12 13 24 02	CDR	Looks like we got a good separation, Houston. Okay, MAIN ATT, MIN IMPULSE.
12 13 24 07	CMP	Okay, MINIMUM IMPULSE.
	CDR	BMAGs, RATE 2.
12 13 24 09	CMP	RATE 2.
	CDR	CAUTION AND WARNING, COMMAND MODULE.
12 13 24 12	LMP	It's there.
	CDR	Okay, RCS TRANSFER, COMMAND MODULE, I got.

[redacted]

	CC	- - ... sites in 1 minute. There'll be a slight break of comm here.
	CMP	Okay.
	CDR	Okay, RCS pressure still looks good. LOGIC, OFF.
	CC	- - ... go to OMNI Charlie.
	CDR	COMMAND MODULE RG - LOGIC, OFF. Monitor voltage - voltage - -
12 13 24 28	CMP	OMNI Charlie.
	CDR	Voltage MAIN A and MAIN B, Jack.
12 13 24 30	LMP	I'm monitoring.
	CDR	Make sure it's still up.
	LMP	Yes, it's good.
	CDR	YAW back to zero and select Charlie.
12 13 24 34	CMP	Okay, we're yawing back to zero.
	CDR	And you got Charlie, right?
	LMP	Yes, we got Charlie.
	CDR	Okay. Pitch to entry attitude, 152. Boy, that sure created a lot of junk around here.
	CMP	(Laughter) Got junk all over the place (laughter).
	CDR	You might be able to see it out there if you look. Down this way.
	LMP	I saw the jet firing.
	CDR	Did you? Okay.
	LMP	You know - you know, there's a lot of stuff streaming by us, the ullage jets.
	CDR	Okay, Ron, you can pitch down 152, when you get to it.

[redacted]

	CMP	Okay. Yes, wait a minute. I'm going to take a look at the horizon here first.
	CDR	EMS DATA fir - data's still good.
	CMP	Okay, stand by. 36, 170, 1044. Okay, we're MINIMUM IMPULSE, RATE 2, SCS; DIRECTs are ON; AC/DC.
	CDR	1044 point. Okay. This is all we got. Just what's under us.
	LMP	It'll be enough.
12 13 25 52	CDR	Okay, verify to DATA. We are in ENTRY. Okay, whenever you're ready, I'll - when you get back in, I'll give you the ENTRY DAP.
	CMP	Very good. I'm ... SCS, anyhow.
	CDR	Okay. Impact latitude and longitude, okay. 1788, 6613, and a minus 1. That's good. Should be NOUN 22.
	CMP	It will be.
	CDR	Okay, until you get back to 1 - about 152. You - you might have - you might see it out there. I don't know if you can.
	CMP	You know the sound of the jet firing is a lot louder than what we usually had the simulators set for.
	CMP	Okay, we're back to the dark horizon again, but the ... are on down.
	CDR	Turn some lights on; how about it?
	CMP	On?
	CDR	On, yes.
	CMP	There you go.
	CDR	Get your ... on, too.

[redacted]

	CMP	Everything up.
12 13 27 44	CDR	Okay, we're coming up at 63. Okay, there's G. There's V_I, and there's range to go. And I'll check them against the EMS.
	CMP	Okay.
	CDR	They're right. Here.
	CMP	Okay, 4153 miles to go, huh?
	CDR	Yes.
	CMP	Velocity is 31,253 feet per second, increasing.
12 13 28 24	CDR	Okay, Houston. We're at 63, and we're just standing by for .05 G.
	CDR	Sure getting cold.
	CMP	Probably warm up after while, I'll bet.
	CDR	Warm up on the water.
	CMP	You know, this thing kind of wants to - wants to yaw left all the time.
	CDR	Keep it coming down now.
	CDR	Probably can't see the Moon, but - maybe you can out one of those windows. I don't know where it is.
12 13 29 41	CC	America, at 9 minutes prior to entry interface here, you're looking great down here.
	CDR	Okay, Bob. We're looking good on board and standing by for .05 G.
	CMP	...
	CDR	You know what you did?
	LMP	Can't win them all. What does yours ...?

[redacted]

	CMP	(Chuckle)
	CDR	No, it should be down and stuck. That should be in.
	LMP	... that down.
	LMP	(Laughter) We still got hydrogen tank (laughter). Houston, be advised that hydrogen tanks 1 and 2 still seem to be with us.
	CMP	(Laughter)
	LMP	We've got gage readings - plus 200 psi.
	CC	Roger. We'll run that one through EECOM.
	CMP	(Laughter)
	CDR	Okay, Ron, SCALE 5/5.
	CMP	Well, we'll save you - save the 5/5 for a minute.
	CDR	Okay, ROT CONTROL POWER, two DIRECTs, MAIN A and MAIN B.
12 13 31 15	CMP	DIRECTs are MAIN A and MAIN B.
	CDR	Got both controllers armed?
	CMP	Both controllers are armed.
	CDR	Okay. Pitch error needle goes - -
	CMP	... AC 1.
	CDR	- - toward zero approaching .05 G. And your .05 G attitude is - I just wrote it down.
	CMP	Should be 153, I think; isn't it?
	CDR	I just wrote it down.
	LMP	No more eating upside down.
	CMP	Here it is, there.

[redacted]

	CDR	Okay, 153.
	CMP	Yes, no more eating upside down. I was just getting used to that. It's a lot of fun. Getting used to it. I was used to it after the second day - first day.
	CDR	Keep going. You're going the wrong way.
	CMP	You know that the - -
	CDR	Yes, I see that.
	CMP	It - it wants to trim itself pitch up, too. I got to keep bopping the right yaw, and I got to keep pitching down to make it go down. You see the - the rate just decreases.
	CDR	Um-hmm.
12 13 32 23	LMP	Two minutes to moonset.
	CMP	Two minutes to moonset. I don't even see a Moon. There it is up there. Can you see it, Jack? It's out of window 3.
	LMP	Oh, there it is; yes.
	CMP	It should be off to your right, you might be able to see it.
	LMP	Okay, yes. I see it.
12 13 32 39	CDR	Okay, moonset's at 16:14.
	CMP	That's the way the Moon looked about 13 - 14 days ago.
	CDR	... smaller ...
	CMP	Small one like that.
	CDR	Yes.
	LMP	Well, I don't think I'm going to make it. There it is. Yes, I'll be able to see it now. When? In about a minute.

[redacted]

	CMP	Try the pressures on both ranges. They still okay?
	CDR	They're both GO. They're both GO.
	CMP	Okay.
	CDR	Okay, you're just about there.
12 13 33 43	CMP	Five minutes to RRT.
	LMP	... you want ...
	CDR	Okay, I will. You got about - a little better than 2 minutes.
	LMP	Two minutes? You sure? I thought it was 14.
	CDR	Sixteen.
	CMP	Sixteen. 304:16 on my card.
	LMP	Okay.
	CDR	Yes, 16:14. ... went gray - barber pole? It's got a cross coupling.
	CMP	Yes, it's got a little bit of a cross coupling, on it. Think we might be picking up C [?] 55. Might be picking up a few rates anyhow. Probably not yet.
	CDR	Um-hmm.
	CMP	Usually about 59.
12 13 34 59	LMP	Got a little oscillation in the amp meter on - when I'm on PYRO BAT. Voltages are good.
	CMP	Just lose them?
	LMP	No. They're okay.
	CMP	Noise disappeared.
	LMP	The needle - the needle is loose in there or something.

[redacted]

	CMP	Oh.
	LMP	Good in the other positions. Just getting an oscillating signal when I switch to it.
	CMP	You couldn't - couldn't see a star out there if you had to. There's all kinds of little white particles floating around out there from the jets.
	LMP	Well, I've lost the Moon.
	CDR	Well, we've had - -
	CMP	Yes, I've lost it, too, out the window.
	LMP	What do I need to change omnis here?
	CDR	No, not according to this.
	LMP	How's your pitch?
	CDR	Good.
	CMP	Pitch is good.
	CDR	You lose the Moon?
	LMP	Yes, I can't - I can't find it now.
12 13 35 57	CDR	I got it. I'll watch it go over the horizon.
	CMP	A little bit to the right, Gene?
	CDR	Lot of daylight out there.
12 13 36 04	CDR	There it goes. Moonset.
	CMP	Set.
	LMP	A little early.
	CDR	Well, it's not all the way down yet.
	LMP	... - -
12 13 36 14	CDR	MARK it. Moonset.

[redacted]

	LMP	That's about 3 seconds.
	CMP	About 2 seconds. Not bad.
	CDR	Okay.
	CMP	Houston, America. Do you still read?
	CC	... loud and clear. We're going out through ARIA.
	LMP	... read.
	CMP	Okay.
12 13 36 34	CDR	And, Houston, moonset was on time. And we're coming up on 2 minutes from RRT, and we're GO onboard.
	CC	Roger, America. You're looking great.
	CMP	Yes, there's the horizon. Got the horizon now.
	CDR	Okay, babe, let's watch your needles.
	CDR	Okay, Ron, I'll verify the EMS on both range to go and V_I. And at .05, we'll get NORMAL and - -
	CMP	G and A [?]. If it's good, then we'll go to CMC.
	CDR	Are the switches happy?
	CMP	Switches look good. We got RATE COMMAND to go yet.
	CDR	And you're - -
	CMP	I'll get that - -
	CDR	You're in RATE 2 on -
	CMP	RATE 2 on the BMAGs.
12 13 37 33	CDR	Okay; 36 172. We're getting close.
	CMP	Okay, about a minute - to 400,000 feet.

[redacted]

	LMP	Isn't that something?
	CDR	And are we moving!
	CMP	Are we moving in there! Gee whiz! Look at that Earth go by.
	CDR	Well, you're much higher than circular velocity, that's why. See, you're - you're at a - you're just at suborbital altitude almost.
	CMP	Hey, needle's off the peg, by the way.
	CDR	Okay, very good.
	CMP	Just looking good.
	CDR	See, you're supercircular velocity with a less-than-circular altitude, so you really are going by. Whew!
	CMP	Hey, Jack, can you take a picture of that, too? Get a picture of the horizon? ... - -
	LMP	... know - -
	CMP	Is that pointed at the horizon?
	LMP	... about this? ... - -
	CDR	No, don't take it down. Leave it in. Don't take it off.
	CMP	That's all right. ... - -
	CDR	Don't take it off. Don't take it off.
	CDR	Okay, Houston, we're 5 seconds from RRT.
	CC	Roger, America.
12 13 38 41	CDR	RRT.
	CMP	Okay, we'll go to RATE COMMAND?

[redacted]

12 13 38 51	CDR	Okay, 36 and 1050. Stand by.
12 13 38 54	CMP	Okay. And .05 G is 29. We're picking up a glow.
12 13 38 59	CDR	.01 G. .02.
	LMP	There's the G.
	CDR	Okay, we're trimming in now.
	LMP	Coming in.
12 13 39 10	CDR	.05 G. Get it on.
	CMP	Okay; .05 G. We got a - -
	CDR	The numbers look good.
	CMP	Numbers look good. Let's get the computer.
	CDR	Okay.
12 13 39 16	CMP	5/5 and SCALE. Here we're coming in. Man, look at that bright!
	CDR	- - ... Here you go, babe.
	CMP	Man, that's really bright. I can't even look outside.
	CDR	Okay.
	CMP	Coming down the pike. There's one g - -
	LMP	...
12 13 39 27	CDR	Okay, 0.8.
	CMP	Okay, we're coming down. ... - -
12 13 39 32	CDR	... one g, 1.4.
12 13 39 35	CMP	Okay, there's 2.
12 13 39 36	CDR	1.7.
	CMP	Be sure to put the sun glasses on.

[redacted]

12 13 39 38	CDR	2.0.
12 13 39 39	CMP	Three.
12 13 39 40	CDR	Three g's.
	CMP	Gee, criminy; that's coming down!
12 13 39 43	CDR	Three g's.
12 13 39 44	CMP	Okay, there's 4 g's. There's 4 - -
12 13 39 46	CDR	3.8, 4 ...
	LMP	Come on down there, 5.
12 13 39 51	CDR	Five g's.
	CMP	Okay. Gee, criminy. That's work ... There's 6.
12 13 39 56	CDR	Six g's.
	LMP	Okay.
12 13 39 58	CDR	Six g's.
	CMP	SCS is looking good.
	CDR	... roll.
	LMP	Okay.
12 13 40 00	CDR	6.3, 6.5.
	CMP	6.5.
	LMP	She switched yet?
12 13 40 05	CDR	6.6, 6.5. Okay.
	CMP	6 point - point 5.
	LMP	6.5, okay.
	CDR	There's the roll. Ready roll.

[redacted]

	CMP	Okay, it's rolling right. ... - -
	CDR	G's coming off.
	CMP	G's coming off.
	CDR	5.4. 5.1.
	CMP	Can't see the stupid EMS, but there it goes.
	CDR	Okay, it's working good.
	CMP	Okay - -
12 13 40 25	CDR	4.4 g's.
	CMP	There it goes.
12 13 40 28	CDR	4.2; it's coming off. Roll 180.
	CMP	Okay, that's right.
	CDR	She's looking good.
	CMP	There's the EMS. I got it.
	CDR	I'll - I'll give you a hack when you're subcircular.
	CMP	Okay. That's all right. We're coming down.
12 13 40 36	CDR	3.8 g's.
12 13 40 37	CMP	There's 4.
12 13 40 39	CDR	Okay, roll up 142.
	CMP	Okay. That's all right. It's doing good.
12 13 40 42	CDR	Roll up 80.
12 13 40 43	CMP	Okay, 4 g's.
12 13 40 44	CDR	Roll up 50.
12 13 40 45	CMP	3.8.

[redacted]

12 13 40 46	CDR	3.8. Looking good here, Ron.
	CMP	Okay. ... lift our ... should be.
12 13 40 51	CDR	Okay, left 60.
	CMP	Okay.
12 13 40 53	CDR	Left 80.
	CMP	That's good.
12 13 40 57	CDR	Okay, holding at 4 g's. Okay, there's 67.
	CMP	P67.
	CDR	P67. Zero roll.
	CMP	Zero roll, okay. We're doing all right.
	CDR	Okay.
	CMP	Left 23. That's right.
	CDR	Left 23, left 65.
12 13 41 07	CMP	Okay, got a range to go; 400 on the EMS and 450 on the range to go.
	CDR	Okay.
	CMP	...
	CDR	Okay, looking good here.
	CMP	I'm trying to look at ..., but I can't see (laughter). Okay, here comes 4 g's.
12 13 41 21	CDR	Okay. Roll left 100.
	CMP	Left 100.
	CDR	Roll left 100.
12 13 41 26	CMP	Okay, minus 95.

[redacted]

12 13 41 28	CDR	Okay, we're 45 long; we're 21 south, and we're flying it out.
12 13 41 32	CMP	Three g's. Okay.
	CDR	Okay, roll right.
	CMP	Okay, ... - -
	CDR	Okay, we'll fly that south error out.
	CMP	That's good. We're over the top.
	CDR	That's what we wanted.
	CMP	Okay, I got a potential of 350 and 350. Okay, ... see the horizon - -
	CDR	Okay, roll right 80.
	CMP	- - ... air glow.
	CDR	Roll right 80.
	CMP	Okay.
	CDR	That's just going to fly our south error out.
	CMP	South error out; okay.
	CDR	We're 30 long and 20 shou - south; ... to go. Okay, still carrying about 3 g's. Roll right 80.
	CMP	Okay, that's good.
	CDR	How's the EMS look?
	CMP	EMS is on top.
	CDR	Okay.
	CMP	We got a potential of 300, 287 on the EMS.
	CDR	Okay, that's GO.
	CMP	Okay, it's looking good.

[redacted]

12 13 42 09	CDR	Okay, roll right 65. Our south error's coming out.
	CMP	Okay.
12 13 42 12	CDR	We're 10 long, 14 south. She's going to hold this right roll for a while.
	CMP	Aaah.
12 13 42 19	CDR	Okay, roll right 50.
	CMP	It's hard to hold my head up ... - -
	CDR	Still looking good.
	CMP	Okay.
	CDR	Yes, I know. Me, too.
	CMP	(Laughter) I'll hook it on this ... - -
12 13 42 28	CDR	Okay, roll right to 40. It's looking good.
	CMP	Okay, looking good. 200 to go? 200. ... - -
	CDR	Okay, Jack, we'll cu - we're at - -
	CMP	- - ... 3 g's.
	CDR	- - 4 minutes from RRT now.
	LMP	Roger.
	CMP	Three g's.
	CDR	Okay, roll right 40 - -
	CMP	... going back up there ...
	CDR	Looking good.
	CMP	Okay.
	CDR	Roll right 40.
	CMP	That's where we came through - that little spot back there.

[redacted]

	CDR	Okay, down-range error is good, and cross range is coming in.
	CMP	Okay, roll right 50 yet. Roll right 50, still at 3 g's.
	CDR	Okay, that's still good, because our down range or cross range just came in.
	CMP	Okay, we should reverse ... - -
	CDR	Not - not - not until this goes plus in a while.
	CMP	Okay.
	CDR	... reverse, I'll give you a hack.
	CMP	Three g's; got a potential of 130 - got 130 range.
	CDR	Looking good - 3 g's.
	CMP	Right on.
	CDR	Okay, roll right 40.
12 13 43 14	CMP	Okay, right 40.
	CDR	Okay, right 45.
12 13 43 17	CDR/CMP	Right 45.
	CDR	Okay, down range is getting north so we're going to reverse here, shortly.
	CMP	Okay, the g's getting a little less, about 2.8.
	CDR	Okay, she's going to reverse. Roll right 50. Stand by for reverse.
	CMP	Okay.
12 13 43 28	CDR/CMP	There's the reverse!
	CMP	Okay, over the top.
	CDR	Roll left 60.

[redacted]

12 13 43 31	CMP	Okay. Still about 2.9 g's.
	CDR	Okay, roll left 60.
	CMP	There goes some more pieces off the other side of the spacecraft.
	CDR	Roll left 70 - -
	CMP	- - ... it didn't stay ... - -
	CDR	- - ... picking ... We're north and long.
	CMP	Okay. Not bad. About 2.8 g's yet.
	CDR	Okay, roll left 75.
	CMP	Got a potential of 65, 65 - -
	CDR	Roll left 75.
12 13 43 51	CMP	8000 feet a second. Okay?
	CDR	Okay; 06 - NOUN 64. Range to go is 400. Does that agree? Pretty good?
12 13 44 05	CMP	No, 40. That's right.
	CDR	40, I mean.
	CMP	That's right. ... degrees.
	CDR	Okay, roll left 70; downra - downrange is ... long - -
	CMP	... 3.1 g's.
	CDR	Okay. She's going to reverse on here shortly.
	CMP	Okay, there she goes over the ... - -
12 13 44 16	CDR	There she is there's the reversal.
	CMP	That ought to relax those g's a little bit.
	CDR	Hey, I'm following those pretty good.

[redacted]

	CMP	There, that's good. Beautiful computer.
	CDR	Roll right. Roll right 80.
	CMP	Okay, about 3.1 g's.
	CDR	Roll right 80. We're a little south. We're flying north.
	CMP	We're about 4500 feet a second.
	CDR	Okay, roll ...; CMC is GO.
12 13 44 31	CMP	Okay. Into the scroll, 22 miles; 4000 feet a second.
12 13 44 35	CDR	Okay, Jack, it's coming up on 6 minutes.
	CMP	Zero plus 88 degrees. Okay, that's good.
	CDR	Coming up on 90K.
	LMP	Steam pressure's still there.
	CDR	Okay. Roll right 90, Ron. Looking good.
	CMP	Okay, looking good.
	CDR	Cross range is right in. Down range, you got a mile ... - -
	CMP	Okay. We ought to be in there.
	CDR	- - It's there. Roll left 80.
	CMP	Roll left. Okay. About 2.2 g's.
	CDR	Roll left 80.
	CMP	Okay. It feels like you're on a merry-go-round now.
	CDR	Okay, roll left 80.
	LMP	Here comes the steam pressure.
12 13 44 59	CDR	Okay, that's right. That's about 06:20, Jack.

[redacted]

	CMP	...
	LMP	I got her for you.
	CMP	You got it? Okay.
	CDR	Okay, it's roll left 80.
	CMP	Roll left 80; still good.
	CDR	Roll left 80, down range and cross range are in.
12 13 45 07	LMP	Steam pressure's pegged.
	CMP	Okay, 2 g's.
	LMP	Steam pressure is pegged.
	CMP	Steam pressure is pegged, okay. Is that on time?
	CDR	That's right. Yes.
	LMP	A little late.
	CDR	Drogues will be at 07:39.
	CMP	Drogues at 07:39. Okay. Come in. Rolling back right. ... - -
	CDR	Roll right 100. Okay, there's 67.
	CMP	Okay. ... freeze at 67.
	CDR	Okay. Huh?
	CMP	Freeze it in 67.
	CDR	Okay. Short 1.8 miles according to this.
	CMP	Short 1.8, it says. Okay. Call it out.
	CDR	Hello, Houston; this is America. We're showing 1.8 short. ... - -
12 13 45 38	CMP	Okay, 50K, Jack.
	LMP	Okay, it's 50K.

[redacted]

	CDR	... drogues.
	LMP	SECS PYRO, two, ARM.
12 13 45 43	CMP	ARM the PYROs.
	LMP	CABIN PRESSURE to BOOST/ENTRY.
12 13 45 45	CMP	CABIN PRESSURE to BOOST/ENTRY.
	CDR	Houston, America. We're showing 1.8 miles short.
	LMP	Pyros?
	CMP	ARM the PYROs.
	CDR	17.86 by minus 167.5.
	LMP	They're ARMED.
	CMP	They're ARMED.
	LMP	And we're stable, right?
	CMP	We're stable.
	LMP	Looking good.
	CMP	Coming down like a son of a buck. Man, oh, man!
	LMP	Okay, give me a call at 30K.
12 13 46 02	LMP	Okay, there's 35K.
	LMP	Stand by.
	CMP	Stand by for ELS LOGIC, right?
	LMP	Right. LOGIC and AUTO.
	CMP	Okay. There goes all the paper off the spacecraft.
	LMP	Look for 30K.
	CMP	Okay, there's 30K.

[redacted]

	CDR	Stand by for the drogues.
	LMP	Okay.
	CMP	ELS to AUTO - or LOGIC and then to AUTO.
	LMP	And then the AUTO.
	CDR	Okay, stand by for the ... - -
	CMP	Okay, stand by for the apex.
	CDR	Hold on.
12 13 46 20	CMP	Then the drogues. Okay. There we go!
	CDR	You got a drogue?
	LMP	There's the drogues.
	CMP	There goes the drogues.
	CDR	... drogues.
	CMP	Okay, back them up.
	LMP	Two good drogues.
	CDR	Okay.
	LMP	Two good drogues.
	CMP	Hey, I can't hear you, Jack.
	CDR	Two good drogues!
	LMP	We got the drogues.
	CDR	Drogues are GO!
	CMP	Okay, drogues are GO.
	CDR	Okay, stand by for Jack.
	CMP	Son of a buck!
	CDR	Okay, what have you got on that checklist, Jack?

[redacted]

	CMP	Hey, that really vibrates!
	LMP	Cabin pressure's going up.
	CDR	Very good.
	CMP	What's that?
	LMP	Stand by for mains.
	CMP	Okay. There's 15K.
	CDR	Okay, Houston, America in the blind. We got the mai - or we got the drouges; we got the drogues. Coming through 15K. This is America showing about 1 mile short. We've got the drogues.
	LMP	Stand by for mains.
	CMP	Okay. Okay, there's 12, 13K.
	CMP	Now let's go through that checklist.
	LMP	Okay. Stand by for mains.
	CMP	12K.
	CDR	Hey, Ron, why don't you go on to PTT when you do that, so I can talk to them.
	CMP	Go ahead.
12 13 47 15	LMP	Okay. Mains at 11K.
12 13 47 17	CDR	There are the mains.
	CMP	Gee, criminy.
	LMP	Okay.
	CDR	There are the mains.
	LMP	Okay.
	CDR	They're still reefed. They're still reefed - -

[redacted]

LMP ... - -

CMP Still reefed.

CDR There they go.

CMP There they go. Okay, they're dereefing.

LMP Got two good ones.

CDR Okay, Houston, our mains are out.

LMP Two good ones.

CMP Two good ones. Let's get the third one.

CDR Why don't you go off so I can talk to them? Is it out?

LMP The third one is not good yet.

CMP Third one's not good yet.

CDR Hello, Houston, the mains are out - -

LMP - - ... three mains.

CMP Okay, we got three mains now.

LMP Three mains.

CDR Okay, Houston, this is America. We got three mains. We're coming through 8000 feet.

LMP SURGE TANK O_2, OFF.

CDR Ron, SURGE TANK.

12 13 47 48 CMP SURGE TANK, okay. SURGE TANK is OFF.

LMP Okay, REPRESS PACKAGE, OFF.

CDR Hello, Recovery; this is America. We've got three good mains.

CMP REPRESS PACKAGE, OFF?

[redacted]

	CDR	Coming through 7K. We're about 1 mile short.
	LMP	REPRESS PACKAGE, OFF.
12 13 47 59	CMP	It's OFF.
12 13 48 00	LMP	ANTENNAS, RECOVERY, A's going to SIMPLEX.
	CMP	Okay.
	TIC	*** 35, 050 presently on your *** 7 - -
	LMP	CABIN PRESSURE, DUMP - -
	R-1	Relay, Tico; say again bearing, distance.
	TIC	Relay presently bearing 050; you are on your 245 56 - -
	CDR	- - ... One minute to go.
	CMP	Okay, the DAC's coming down.
	LMP	Okay, stand by.
	CDR	Okay, Recovery; this is America - -
	LMP	STRUT LOCKS.
	CDR	We got three good mains; we're at 6500 feet.
	R-1	... bearing 050. We're on your 24 *** 6 miles.
	LMP	STRUT LOCKS, UNLOCK.
	LMP	Got that one, Geno?
	R-2	This is Photo, visual. Bearing 250, ... 000 at 3.5.
	LMP	... three of them.
	TIC	Photo, Tico. Roger; out.
	R-1	Apollo 17, this is Recovery. Good morning.
	CDR	Hello, Recovery. It's a beautiful day. We're out at 610 - -

[redacted]

LMP RELAY BUS, OPEN.

CDR - - and we've got three good mains.

LMP ELS LOGIC, up; verify.

R-1 This is Recovery; Roger. We've got a nice visual on you.

CMP LOGIC and AUTO.

R-1 They're blooming nicely; ... all ...

LMP FLOODS, POST LANDING.

CDR Outstanding!

CMP FLOODS to POST LANDING.

CDR And all is well on board. All is well on board.

CMP There's the clouds down there.

R-1 ... Recovery. Wonderful.

LMP I'm not going to ...

CDR You sound good down there - -

LMP ... POST LANDING?

R-1 Waiting for you.

CMP Okay.

LMP ... hundred feet.

CMP Okay.

CDR ... Did you ...?

TIC Stand by ... Recovery, my visual bearing bears 100 - -

CDR Wait until I get this ...

[redacted]

TIC	- - my positive, 280 at 11.
CDR	Okay, I'll get it.
R-1	Recovery, Tico. Roger; out.
LMP	Oh, there - okay, I guess it is.
R-1	We have a visual bearing 245; Tacan, 070 ...
LMP	Okay, we're rolling a little ways - -
CDR	Hello, Recovery; this is America. We're out at 4000 feet now, and all is well.
CDR	Aren't those pretty.
CMP	Beautiful, man, oh, man!
LMP	... those things come out ... all on there.
R-1	This is Recovery. Roger.
CDR	Okay, Jack, the next big move is ..., the breaker check, and stand by for 800 feet. Okay?
LMP	... in, are we?
CDR	We're at 3500 feet.
CMP	... out ...
CDR	Well, that's at ... feet.
R-1	Recovery, Tico.
TIC	Go ahead.
R-1	Request computer read-out. Over.
TIC	Not yet. Apollo 17 - -
R-1	This is Recovery.
TIC	- - standing by for your DSKY read-up.

[redacted]

	CDR	Okay, Houston, DSKY shows minus 1.3, lat. is minus 17.88; long. is minus 166.11.
	CMP	Ha, hah! Beautiful.
	CDR	Okay, 2500 feet.
	R-1	Recovery; Roger.
	TIC	... Tico - -
	CDR	At 800 feet, we want the CABIN PRESSURE RELIEF, two of them, CLOSED.
	LMP	Okay, we'll close them at 800 feet. Okay?
	CMP	... clouds. Scattered clouds.
12 13 50 47	CDR	Hello, Recovery. America's through 2000 feet.
	R-1	Recovery; Roger.
	P-1	This is Photo circling the command module as it descends. The three main parachutes are fully deployed.
	LMP	- - ... CABIN PRESSURE RELIEF - -
	CMP	Okay.
	CDR	There's 15, 1600 feet.
	CDR	Okay, America is out of 1500 feet.
	CDR	... they?
	CMP	Yes. See any holes ... this way?
	LMP	Just beautiful, I don't see any holes at all.
	CDR	... - -
	P-1	Three main parachutes are fully deployed. The command module is descending, and Photo is circling as it descends.

 [redacted]

	CMP	- - ... hundred.
	CDR	Okay, there's 900. And America is now out of - -
	LMP	At 800?
	CDR	- - 800 feet.
	LMP	Okay. CABIN PRESSURE RELIEF, two of them, CLOSED.
12 13 51 38	CMP	Two, CLOSED.
	CDR	And here come the BUS TIES.
	CMP	... CLOSED.
	CDR	You got them?
	LMP	Yes.
12 13 51 43	CDR	Okay, we're off.

END OF TRANSCRIPT