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444 pp.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APOLLO 12
ONBOARD VOICE
TRANSCRIPTION
(U)

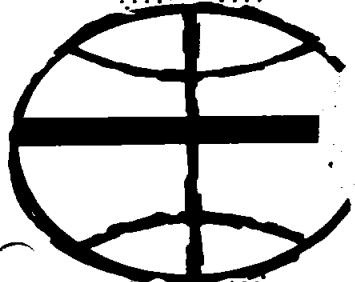
RECORDED ON THE
COMMAND MODULE
ONBOARD RECORDER
DATA STORAGE EQUIPMENT
(DSE)

JANUARY 1970

GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS

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CRAFT CENTER
TEXAS

INDEXING DATA
DATE
01-00-70

OPR
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PCM

SUBJECT
(Title)

SIGNATOR
MSC

LOC
019-14

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INTRODUCTION

This document is the transcription of the Apollo 12 flightcrew 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 were forwarded to the NASA Manned Spacecraft Center, Houston, Texas. Transcription of these tapes was managed by David M. Goldenbaum, Test Division, Apollo Spacecraft Program Office, to whom questions regarding this document should be referred.

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; a series of three asterisks (****) is used to designate places when the voice was clipped because the VOX mode was in use. 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.

The Apollo 12 mission was flown November 14 to 24, 1969. The command and service module (CSM) was designated Yankee Clipper and the lunar module (LM) was called Intrepid.

Speakers in the transcript are identified as follows:

Spacecraft:

CDR	Commander	Charles Conrad, Jr.
CMP	Command module pilot	Richard F. Gordon, Jr.
LMP	Lunar module pilot	Alan L. Bean
SC	Unidentifiable crewmember	
MS	Multiple speakers	

Mission Control Center:

CC	Capsule communicator (CAP COMM)
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Remote sites:

AB	Airboss (Recovery aircraft)
CT	Communications technician (COMM TECH)

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Pl Photographic helicopter 1

R Recovery helicopter

The transcript is divided into three columns--time, speaker, and text. The time column consists of four two-digit pairs for 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.

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DAY	HOUR	MIN	SEC	
				DAY 1
-00	00	00	05	CC IGNITION, 3, 2, 1, 0 -
00	00	00	00	CC/CDR LIFT-OFF.
00	00	00	01	CMP The clock's running.
00	00	00	02	CDR Lift-off. The clock's running.
00	00	00	03	LMP Three seconds.
00	00	00	04	CDR I got a yaw program -
00	00	00	06	LMP Six seconds.
00	00	00	10	LMP There's 10 seconds.
00	00	00	12	CMP Clear the tower.
00	00	00	13	CDR Roger. Clear the tower. I got a pitch and a roll program, and this baby is really going.
00	00	00	18	CMP Man, is it ever!
00	00	00	19	CC Roger, Pete.
00	00	00	20	CMP Twenty seconds.
00	00	00	21	CDR That's a lovely lift-off. That's not bad at all.
00	00	00	24	CMP Everything's looking great. Sky's getting lighter.
00	00	00	26	CDR Okay.
00	00	00	30	LMP Thirty seconds.
00	00	00	31	CDR Looks good.
00	00	00	32	CDR Roll's complete.
00	00	00	33	LMP This thing moves, doesn't it?
00	00	00	34	CC Roger, Pete.
00	00	00	37	CMP What the hell was that?

00 00 00 38 CDR Huh?

00 00 00 39 CMP I lost a whole bunch of stuff; I don't know - -

00 00 00 40 CDR Turn off the buses.

00 00 00 41 CC MARK.

00 00 00 42 CC One Bravo.

00 00 00 43 CDR Roger. We had a whole bunch of buses drop out.

00 00 00 45 LMP There's nothing - it's nothing - -

00 00 00 47 CMP A circuit -

00 00 00 48 CDR Where are we going?

00 00 00 50 CMP I can't see; there's something wrong.

00 00 00 51 CDR AC BUS 1 light, all the fuel cells - -

00 00 00 52 MS ...

00 00 00 56 CDR I just lost the platform.

00 00 00 59 CMP All we've got's the GDC.

00 00 01 01 CDR Yes. Okay. We just lost the platform, gang. I don't know what happened here; we had everything in the world drop out.

00 00 01 09 CMP I can't - There's nothing I can tell is wrong, Pete.

00 00 01 11 CDR I got three FUEL CELL lights, an AC BUS light, a FUEL CELL DISCONNECT, AC BUS OVERLOAD 1 and 2, MAIN BUS A and B out.

00 00 01 21 LMP I got ac.

00 00 01 22 CDR We got ac?

00 00 01 23 LMP Yes.

00 00 01 24 CDR Maybe it's just the indicator. What do you got on the main bus?

00 00 01 26 LMP Main bus is - The volt indicated is 24 volts.

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00 00 01 29 CDR Huh?

00 00 01 30 LMP Twenty-four volts, which is low.

00 00 01 33 CDR We've got a short on it of some kind. But I can't believe the volt --

00 00 01 36 CC Apollo 12, Houston. Try SCE to AUXILIARY. Over.

00 00 01 39 CDR Try FCE to AUXILIARY. What the hell is that?

00 00 01 42 CMP Fuel cell --

00 00 01 44 CC SCE - SCE to AUXILIARY.

00 00 01 45 CDR Try the buses. Get the buses back on the line.

00 00 01 48 LMP It looks - Everything looks good.

00 00 01 50 CDR SCE to AUX.

00 00 01 52 CMP The GDC is good.

00 00 01 54 CDR Stand by for the - I've lost the event timer; I've lost the --

00 00 01 57 CC One Charlie.

00 00 01 58 CDR One - one Charlie.

00 00 02 01 CMP Two minutes. EDS, AUTO, is OFF.

00 00 02 03 CDR Yes.

00 00 02 04 CDR EDS, AUTO --

00 00 02 06 CC 12, Houston. GO for staging.

00 00 02 08 CDR Roger. GO for staging. We had some real big glitch, gang.

00 00 02 13 CMP What do the buses read, Al?

00 00 02 15 LMP Stand by.

00 00 02 16 CDR Center engine.

00 00 02 17 CMP Okay.

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00 00 02 19 CC 12, Houston. Try to reset your fuel cells now.

00 00 02 20 LMP Reset the fuel cells.

00 00 02 21 CMP Wait for staging.

00 00 02 22 CDR Wait for staging, yes.

00 00 02 23 CMP Hang on.

00 00 02 24 CDR Hang on.

00 00 02 25 CMP 25 - 27 - 32.

00 00 02 38 CDR Got a clock running over here?

00 00 02 39 LMP Yes. Hang on.

00 00 02 41 CMP There's 41. Hang on, there it is.

00 00 02 43 LMP That's it.

00 00 02 44 CMP/CDR That's it. That's it.

00 00 02 45 LMP Staging.

00 00 02 46 CMP Hang on.

00 00 02 47 CDR Okay, GDC is good. Got a good S-II, gang.

00 00 02 49 CC We copy, Pete. You're looking good.

00 00 02 51 LMP Cabin pressure's okay.

00 00 02 52 CMP We're okay.

00 00 02 53 CDR Okay, now we'll straighten out our problems here. I don't know what happened; I'm not sure we didn't get hit by lightning.

00 00 03 00 CMP GDC is good - -

00 00 03 01 CC - - is looking good, Pete.

00 00 03 02 CDR Okay, I have a good GDC, and Al has got the fuel cells back on, and we'll be working on our ac buses. Is that ac bus working? - -

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00 00 03 10 CC Pete, your fuel cells look good down here.

00 00 03 12 LMP Everything looks good.

00 00 03 13 CMP Stand by.

00 00 03 16 MS ...

00 00 03 17 CDR I suggest we do a little more all-weather testing - -

00 00 03 18 CMP Tower JETT.

00 00 03 19 LMP Tower JETT.

00 00 03 20 CMP Okay.

00 00 03 21 CC Amen.

00 00 03 22 CDR There goes the tower, gang; that's away clean. It looked good.

00 00 03 26 CC Go, Pete. You're in mode II.

00 00 03 29 CDR Roger. In mode II. No sweat.

00 00 03 31 CMP PPO₂ HIGH.

00 00 03 34 LMP I think that's probably the ...

00 00 03 35 CMP I'll tell you what I think happened. We lost all the fuel cells.

00 00 03 39 CDR They sure did; they dropped right off the - -

00 00 03 40 CMP We still got them back? We got them back now?

00 00 03 41 CDR Yes.

00 00 03 42 LMP Yes, they look okay.

00 00 03 44 CDR Okay, we've got - an ISS light on, and we've got a cycling CO₂ PARTIAL PRESSURE HIGH which I don't - bother me particularly, and we have reset all the fuel cells, have all the buses back on the line, and we'll just - clear up the platform when we get into orbit.

00 00 04 03 CC Pete - real good.

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00 00 04 04 CMP What's that PPO₂ I want?

00 00 04 06 CDR Hey, that's one of the better SIMs, believe me. Phew! Man alive! I'll tell you what happened - -

00 00 04 12 CC We had a couple of cardiac arrests down here, too, Pete.

00 00 04 15 CDR There wasn't any time for that up here. Okay, we've got a good clock running here, and correct me, I'm going to give you a mark at 4 plus 30. I've lost my event timer, and -

00 00 04 30 CDR MARK.

00 00 04 31 CDR Four plus 30.

00 00 04 32 CC Good, Pete.

00 00 04 33 CDR Okay, we're all organized again, gang.

00 00 04 35 CMP I think the only thing we've lost now is the ISS. Our number 1 ball is just drifting all over the place; we'll have to catch it later.

00 00 04 41 CC - - Dick.

00 00 04 43 CMP You might have the G&C guys think about how we're going to get that thing, because it's just drifting; it's floating.

00 00 04 49 CC Okay, we're thinking.

00 00 04 52 CMP Stand by 5 minutes.

00 00 04 55 LMP Can't say that I've ever seen that before. Man alive - -

00 00 04 58 CDR How about - Let me give it a VERB 40 NOUN 20?

00 00 05 00 CMP Let's not - let's not do anything until we get into orbit - -

00 00 05 01 LMP Yes.

00 00 05 02 CDR Let's just lock it up.

00 00 05 03 CMP Huh?

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00 00 05 04 CDR Let's lock it up.

00 00 05 05 CMP No, let's let the ground worry about - -

00 00 05 06 CC 12, Houston. We won't be sending you an S-IVB to COI call.

00 00 05 09 CDR Okay. Understand. And can you give us some good words like let's get the DSKY, I mean the IMU, calmed down; it's rolling all over the place.

00 00 05 20 CC Okay, Pete. And if you do a mode IV, it'll be on the backup.

00 00 05 22 CDR Yes, no sweat. I got a good SCS.

00 00 05 25 CC Okay, good show.

00 00 05 27 CDR I got a little vibration of some kind chugging along here; minding her own business, though.

00 00 05 33 CMP How's the pressures?

00 00 05 35 CC Okay, Pete.

00 00 05 38 CMP How are the pressures?

00 00 05 39 CDR What pressures? Oh, those - -

00 00 05 41 CMP Tank pressures.

00 00 05 42 CDR Fine. Well - -

00 00 05 44 LMP Cabin pressure's good.

00 00 05 46 CDR - - I got to get - I got to get organized. What time is it?

00 00 05 49 CMP Call it 04:59.

00 00 05 50 LMP 05:50.

00 00 05 51 CMP 05:50.

00 00 05 52 CDR Stand by for the gimbal motors, Houston, at - -

00 00 05 53 CMP 05:50.

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00 00 05 54 CDR Okay.

00 00 05 55 CMP Stand by, Al, for gim - -

00 00 05 56 CC 12 - -

00 00 05 57 CMP God darn Almighty! Wasn't that something, babe?

00 00 05 59 CDR (Laughter)

00 00 06 00 CMP You know what it did? I know what it is; it knocked - it just took all the fuel cells off the line - -

00 00 06 04 CDR Yes, it did.

00 00 06 05 LMP Yes, but what the hell did it?

00 00 06 06 CC Apollo 12, Houston. Level sense arm, 8 plus 37; cut-off, 9 plus 11.

00 00 06 13 CDR Okay, here come the gimbal motors. Ready, Al, PITCH 1.

00 00 06 15 LMP Go, babe.

00 00 06 16 CMP 06:16.

00 00 06 17 LMP You got it.

00 00 06 18 CDR Okay. YAW 1.

00 00 06 19 LMP You got it.

00 00 06 20 CDR Okay. Here comes 2.

00 00 06 24 LMP Yes.

00 00 06 25 CDR And here comes 2. Okay. I think the thing that probably got the ISS was the low voltage. I don't know.

00 00 06 32 CMP Yes. Yes, it just fell open.

00 00 06 38 CC S-IVB to orbit.

00 00 06 39 CDR S-IVB to orbit.

00 00 06 43 CMP Man, oh man - -

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00 00 06 44 LMP Isn't that a --
00 00 06 45 CDR Wasn't that a SIM they ever gave us?
00 00 06 46 CMP Jesus!
00 00 06 50 CDR (Laughter)
00 00 06 51 CMP That was something else. I never saw so many --
00 00 06 52 CDR (Laughter)
00 00 06 54 CMP -- There were so many lights up there, I couldn't even read them all.
00 00 06 55 CDR (Laughter)
00 00 06 57 CMP There was no sense reading them because there was - I was - I was looking at this; Al was looking over there --
00 00 07 02 CDR Everything looked great (laughter) except we had all the lights on --
00 00 07 05 CC 12, Houston. You're right smack dab on the trajectory; your IU's doing a beautiful job.
00 00 07 09 CDR Okay. We're all chuckling up here over the lights; we all said there were so many on, we couldn't read them.
00 00 07 24 CDR How about a VERB 40 NOUN 20 or something to - to lock up that --
00 00 07 29 CC Houston. Give us OMNI Delta.
00 00 07 31 LMP Okay.
00 00 07 32 CDR Roger. Going to OMNI Delta.
00 00 07 33 LMP How about your --
00 00 07 34 CDR Hey, how about that? Get that on. Yes.
00 00 07 35 CMP Got them. I got them on a while ago.
00 00 07 36 CDR Okay. Good show.
00 00 07 38 LMP Son of a gun.

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00 00 07 39 CMP What are we up to, 2g's?

00 00 07 40 CDR (Laughter)

00 00 07 41 CMP Oops! Oops, center engine.

00 00 07 42 CDR Center engine.

00 00 07 43 CMP Wake up!

00 00 07 44 CDR (Laughter)

00 00 07 46 CDR ... is something! (Laughter)

00 00 07 47 LMP That's known as the LMP's nightmare (laughter).

00 00 07 50 CDR (Laughter)

00 00 07 52 LMP Sure it is.

00 00 07 53 CMP Well, I'm - I'm starting to worry about this platform now, gang.

00 00 07 55 CDR Yes.

00 00 07 57 CC Apollo 12, Houston. We can start getting that platform squared away. Go IMU, POWER, STANDBY, and then back to ON. We'll get her caged up.

00 00 08 05 CMP IMU, POWER.

00 00 08 07 CDR POWER. Okay.

00 00 08 11 CMP STANDBY, PROCEED.

00 00 08 12 CDR Okay. We'll wait until we get through staging here, I think, Houston.

00 00 08 20 CC Okay. Soon as you can reach it, that's the way to go.

00 00 08 22 CMP Where the hell is it?

00 00 08 23 CDR IMU POWER's over on ... --

00 00 08 24 CMP Oh, ... side.

00 00 08 25 CC 12, Houston. GO for staging.

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00 00 08 27 CDR Roger. We're GO for staging.

00 00 08 31 LMP ... - G&N POWER. ...?

00 00 08 35 CMP Yes.

00 00 08 36 CDR Okay. You want the LMP to turn off the G&N POWER and then bring it back on, and you want me to use my IMU CAGING switch, is that right?

00 00 08 44 CMP No. Don't hit that CAGING switch --

00 00 08 45 LMP No, no, no.

00 00 08 46 CC Stand by on that, Pete.

00 00 08 47 CMP Don't hit that CAGE switch.

00 00 08 48 LMP 08:48.

00 00 08 50 CDR Okay. Stand by.

00 00 08 51 LMP 08:50.

00 00 08 54 CDR 09:11 is shutdown? Huh?

00 00 08 58 CMP Yes, 09:11.

00 00 09 02 CDR I think we got hit by lightning.

00 00 09 04 CMP/LMP I do, too.

00 00 09 06 CMP Something took care of those panels, I'll say that for it.

00 00 09 10 CDR ...

00 00 09 11 LMP 09:10.

00 00 09 12 LMP 09:11, Dick.

00 00 09 13 CDR Two ...

00 00 09 14 MS ...

00 00 09 15 CDR Okay. Looks good.

00 00 09 16 LMP You staging?

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00 00 09 18 CMP Yes. See the throttle?

00 00 09 19 CDR Okay. There you go. Got a good S-IVB; nice, smooth staging.

00 00 09 21 LMP Look at that stuff go by.

00 00 09 22 CC Roger, Pete. Your thrust looks good.

00 00 09 24 CDR Okay. Give us more words on the IMU now.

00 00 09 30 LMP I got ice all over the windows out here, y'all. I got the horiz - don't have the horizon, but I got the sky.

00 00 09 38 CDR Pointed down pretty good.

00 00 09 39 LMP Hope those thrusters don't have the ice - -

00 00 09 41 CC Stand by a minute, Pete; we're still talking.

00 00 09 43 CDR Okay.

00 00 09 44 LMP No, we're - we're in good shape. Where's your card here, Dick? We're at the 9 - -

00 00 09 47 CMP Okay. Hold still.

00 00 09 48 LMP - - ... low.

00 00 09 51 CMP Yes. Okay. In 10 minutes, we should be at 246.

00 00 09 56 CDR That was right on the profile. Good ...

00 00 09 58 CMP Ten minutes.

00 00 10 01 CDR All right. Get your - get your shutoff checklist out.

00 00 10 04 LMP I got it. Now, listen, Dick, all this - best thing I can - -

00 00 10 06 CMP You haven't pushed this G&N POWER, by the way.

00 00 10 07 LMP Yes, yes - -

00 00 10 10 CC ... mode IV.

00 00 10 11 CDR Roger. Mode IV.

00 00 10 14 CMP I got a restart - I got a RESTART PROGRAM alarm, and all ... - there's the GIMBAL LOCK. Get it out of gimbal lock. ... my timer, I ...

00 00 10 28 LMP Well, this one's running.

00 00 10 35 CMP ...

00 00 10 36 LMP ... 36.

00 00 10 38 CMP Shutdown. We've got less than a minute to shutdown.

00 00 10 45 CDR Now get the gimbal motors off -

00 00 10 48 LMP Got about a half a g.

00 00 10 50 CMP Yes, sir. We're getting ... - -

00 00 10 51 LMP Well, I'll tell you one thing - -

00 00 10 53 CMP - - just do it right.

00 00 10 54 LMP - - ... right.

00 00 10 55 CMP ...

00 00 10 59 CDR Yes. Let's get ... right behind the eight-ball and get ahead.

00 00 11 05 LMP Cabin pressure looks good.

00 00 11 08 CDR Yes, we ought to get shutdown here in about - -

00 00 11 09 CC Houston. Cutoff, 11 plus 35.

00 00 11 12 CMP 35.

00 00 11 13 CDR 11 plus 35. Roger-Roger. We get this platform - turned up on the S-IVB.

00 00 11 19 CMP I hope we can iron out - -

00 00 11 20 CDR I hope.

00 00 11 21 CMP Yes, I do too. ...

00 00 11 24 LMP I don't either. I think it was the low voltage; it just fell off. Maybe it got hit.

00 00 11 29 CDR Okay. Stand by for shutdown.
00 00 11 30 CMP Stand by. 31, 32 ...
00 00 11 32 CDR There it is -
00 00 11 33 CDR SHUTDOWN.

TIME SKIP

00 01 54 45 CDR 02:25:27. Roger, and as soon as we get into darkness, we'll give you the other P52, sir.
00 01 54 50 CC Roger. Don't forget OPTION 3, Pete.
00 01 54 55 CDR Roger-Roger. OPTION 3.
00 01 54 58 LMP Okay. My mistake is putting all this junk in this pocket, but this is the obvious pocket to put the goody.
00 01 55 08 CMP Well, you did take a long time.
00 01 55 10 LMP Give me a paper ... --
00 01 55 11 CDR ... the EMS?
00 01 55 12 CMP Good boy.
00 01 55 13 LMP Down in that right-hand lower pocket of mine. Put this there, too - and this.
00 01 55 20 CMP ... right-hand lower pocket?
00 01 55 22 CDR Right --
00 01 55 23 CMP How come you got that pocket over there? This one, huh?
00 01 55 26 CDR GDC ALIGN. All right, I'll do that, right now. By-by, see you at Carnarvon. Here's a couple of more data for this.
00 01 55 36 LMP Lower your foot if you can.
00 01 55 38 CDR Okay.

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00 01 55 39 LMP There you go. That's a boy. You got a book over here, too, you know.

00 01 55 42 CDR Yes. I got to get that out of there.

00 01 55 44 CMP Didn't you want it?

00 01 55 45 CDR Yes.

00 01 55 46 CMP Huh?

00 01 55 47 CDR Let me take this book out.

00 01 55 49 CMP Okay.

00 01 55 50 CDR ... all the other stuff in.

00 01 55 51 CMP ... had a book in there.

00 01 55 53 CDR I bet old baby ... and guys almost fell off their consoles.

00 01 55 57 LMP Bet they did.

00 01 55 58 CMP They weren't the only ones that almost fell off their consoles.

00 01 56 01 CDR Okay, got to align the GDC.

00 01 56 03 LMP Why bother? Why do you want to do another alignment?

00 01 56 06 CMP It's the time - it's the time you said you wanted, Pete.

00 01 56 10 CDR (Laughter) I was kidding, ...; I was kidding.
VERB 48, ENTER.

00 01 56 17 LMP What are you doing with the DSKY, now?

00 01 56 19 CDR I'm loading it. 31102, all balls, zero, PRO; 63479, 32563, PRO. Gimbal angles are minus 5.4, plus 1.33. Good. Set ORDEAL. VERB 83, ENTER; VERB 83, ENTER. At Canary LOS, we're supposed to do this, and I'm supposed to bring the pyro's up and on, translational control power up and on.

00 01 56 49 CMP After you put all that in the DSKY, I'll do my align --

00 01 56 51 CDR Wait, wait. Let me finish.

00 01 56 53 CMP I will. I will.

00 01 56 55 CDR You're not all the way in darkness yet anyhow.

00 01 56 57 CMP Yes, but I got stars -

00 01 57 01 CDR Got them in the - -

00 01 57 02 CMP I can't make out - -

00 01 57 03 CDR - - telescope?

00 01 57 04 CMP - - I got two, I got two stars in the telescope.

00 01 57 06 CDR Boy, it's taking a long time to do VERB 83. No, that's all right, that's better. That baby's doing a little bit better, now - 1.37. I'll bet my wife, your wife, and ... fainted dead away.

00 01 57 18 LMP Right, they don't know enough to ... much better.

00 01 57 20 CMP I'll bet they did when you started calling out about 18 lights.

00 01 57 23 CDR (Laughter)

00 01 57 24 LMP (Laughter) That platform - -

00 01 57 25 CDR All right, Dick Gordon, the computer is yours, and I'm arming the pyro's, gang. Be advised the pyro's are armed. Now, ... TRANS CONTROL POWER is coming up and ON; ROT CONTROL POWER is going to AC/DC; ROT CONTROL POWER, DIRECT, to MAIN A/MAIN B; LAUNCH VEHICLE INDICATOR/GPI, S-II/S-IVB, verify; it is; LAUNCH VEHICLE GUIDANCE should be IU, verify.

00 01 57 56 LMP ...

00 01 57 58 CDR Circuit breakers (clears throat) - No, wait a minute; I'm right at the place where I got to stop, right now. All right, no DIRECT ULLAGE breakers yet. Stop right there. Pick it up again after Dick Gordon gets done his namby-pamby - -

00 01 58 14 CMP Well, there's P52 ..., and I don't see a single star.

00 01 58 18 CDR ... right over. Got it in the sextant?

00 01 58 21 CMP Yes, sure have.

00 01 58 22 CDR Isn't that interesting! Why don't you look back in the telescope?

00 01 58 25 CMP I have. It's not in the telescope, Pete.

00 01 58 27 CDR Well, you got a lot of daylight on you, still, out there, Dick.

00 01 58 29 CMP I couldn't see a damn thing in the telescope, and I don't see any star right now.

00 01 58 33 CDR Okay, . . . - -

00 01 58 34 CMP That thing's right smack - great big one - right smack in front of . . .

00 01 58 40 CDR Okay.

00 01 58 42 CMP What's that - hitting me in the shoulder?

00 01 58 45 LMP Which shoulder?

00 01 58 47 CMP Right.

00 01 58 48 CDR Hey, Al Bean?

00 01 58 49 LMP Yes, sir.

00 01 58 50 CDR - - our cabin heat's down, isn't it? It's 5.4.

00 01 53 52 LMP Yes, it's okay. I was checking it a minute ago; it looks okay.

00 01 59 00 CDR I've got my . . . pencils ready to go, here.

00 01 59 02 LMP . . .

00 01 59 04 CMP 12-1/2 - two stars . . . 45 - -

00 01 59 09 LMP That's okay. . . .

00 01 59 10 CMP - - should be Fomalhaut.

00 01 59 12 CDR All that stuff is in there just perfect. All connected. This camera looks like it's ready to - -

00 01 59 18 CMP Pete, I used star number 1 - -

00 01 59 19 CDR All right, just a minute. Let me write all this good stuff down.

00 01 59 22 CMP - - which is Alpheratz and star number 45 which is Fomalhaut.

00 01 59 26 CDR Star number 1 and star number 45. Yes?

00 01 59 29 CMP Okay, and he's in the middle of this sextant.

00 01 59 32 CDR That's beautiful. That's beautiful.

00 01 59 34 CMP But he's sure not ...

00 01 59 36 LMP That's ...

00 01 59 39 CMP Right in the center of the sextant.

00 01 59 50 CMP Should be getting something out of this - It's the best look I got and I can't get any ... too much of a - -

00 01 59 55 CDR There you go. All balls. Now, you're learning, Dick Gordon.

00 01 59 58 CMP (Laughter) I appreciate that.

00 02 00 02 CDR Look at the torquing angles.

00 02 00 03 CMP Okay, there you go.

00 02 00 04 CDR Oh, ho, ho, ho, is that beautiful. Minus three balls 1 $\frac{1}{4}$, minus three balls 28.

00 02 00 14 CMP Plus three balls 18.

00 02 00 16 CDR Plus three balls 18.

00 02 00 18 CMP Two hours and 20 seconds -

00 02 00 20 CMP MARK.

00 02 00 21 CDR Two plus 20 - plus 20.

00 02 00 23 CMP And I'll do a star check.

00 02 00 24 CDR All right, and I'm going to go ahead and do the GDC align - while you're doing all that good stuff.

00 02 00 31 CMP Uh-oh. Well, that's all right.

00 02 00 34 CDR Yes.

00 02 00 35 CMP 405. No stars available --

00 02 00 37 CDR Available, yes.

00 02 00 39 CMP How do you do a VERB 30? I always get stopped by ...

00 02 00 41 LMP That's done.

00 02 00 43 CDR Well, there ought to be a star out there --

00 02 00 44 CMP No, we just ..., there's not much --

00 02 00 46 CDR There's not any stars since we ...

00 02 00 48 CMP That's not a pair; see. I'm just going start ...
Now --

00 02 00 55 CDR All right. Now --

00 02 00 56 CMP PROCEED and ENTER --

00 02 00 58 CDR No. ENTER. ENTER.

00 02 00 59 CMP Why?

00 02 01 00 CDR Well, you could call up a star.

00 02 01 01 CMP I don't want to use the same one I'm doing; see.

00 02 01 03 CDR Oh, isn't there another star that's in that area?

00 02 01 05 CMP No. Alpheratz and Fomalhaut --

00 02 01 06 CDR ... make a pair?

00 02 01 07 CMP How about - I wonder if Enif would be there? That's on the other side of - Well, let's see if Enif would --

00 02 01 14 CDR You could ENTER and load Enif.

00 02 01 17 CMP Now, let's see, here. Enif - I think we could do that. 44 is Enif. Shaft is - is 18; trunnion is 45. I don't - 181 and 45 - I don't know if I'll make that or not. We will shortly, though. No, it's going out - Yes, there it is. Right in the middle of the cross-hairs.

00 02 01 48 CDR We got - yaw drift.

00 02 01 50 LMP Who has?

00 02 01 52 CDR Dick does - -

00 02 01 53 LMP ...

00 02 01 54 CDR Yes. It's - -

00 02 01 55 CMP And that little old star Enif is right in the middle of the sextant.

00 02 01 58 CDR You must have wanted it quite - quite extensively.

00 02 02 01 CMP That sextant is gorgeous. In the middle of the sextant. But I sure don't have anything in the tele - No wonder I had a hard time the first time around.

00 02 02 12 CDR Yes, if you look out in the daytime, you see what you see.

00 02 02 15 CMP Huh?

00 02 02 16 CDR Look out that thing in the daytime, you ... see ... terrible.

00 02 02 20 CMP Man, I'm telling you there isn't anything in the telescope. And that star is as bright as it can be in that sextant.

00 02 02 29 CDR Well, be glad it's that way and not the other way. PROGRAM alarm again.

00 02 02 36 CMP It's going out past 50 degrees, that's all right ... go to ZERO OPTICS. Little hot.

00 02 02 46 CDR Yes, but now I'm cooling off a little.

00 02 02 51 CMP CABIN TEMP in AUTO. I'm going to put this thing in - -

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00 02 03 00 CDR CABIN TEMP in AUTO?

00 02 03 01 CMP -- back to P00 in this, and I'm going to stow these optics for this - -

00 02 03 04 CDR Dick Gordon, should I put the CABIN TEMP in AUTO?

00 02 03 06 CMP Yes. You going to cool it off?

00 02 03 07 CDR Yes.

00 02 03 08 CMP Huh?

00 02 03 11 CDR ... bag.

00 02 03 13 LMP ... There you go.

00 02 03 20 CDR Hey, the way to do - is to learn to housekeep in this thing. Hey, Dick Gordon?

00 02 03 26 CMP Yes, sir.

00 02 03 27 CDR When we trade seats, we're going to have to ...

00 02 03 31 CMP Yes, sir.

00 02 03 32 CDR All right. ... lot of space.

00 02 03 42 CMP ...

00 02 03 43 CDR Yes, ... that's really something else.

00 02 03 48 CMP That's was what - I was really enjoying that ride. It was a very comfortable one.

00 02 03 52 CDR I loved that first ... - -

00 02 03 53 CMP Oh - -

00 02 03 54 CDR - - for 45 seconds.

00 02 03 55 LMP Yes.

00 02 03 58 CMP I couldn't even believe that.

00 02 04 00 CDR I couldn't either. I thought they were kidding me (laughter).

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00 02 04 04 CMP I thought - -

00 02 04 05 CDR The best part of all was Al Bean kept saying, back there this little voice kept saying, "I have power on my buses; I have power on my buses" (laughter).

00 02 04 11 LMP (Laughter)

00 02 04 12 CDR And I kept looking at all those lights and ... - -

00 02 04 15 CMP No wonder the shaft and trunnion ...

00 02 04 18 CDR Huh?

00 02 04 19 CMP I had the shaft and trunnion ...

00 02 04 25 CDR You zero the optics? Is it in CMC or in MANUAL?

00 02 04 30 CMP CMC. All right, OPTICS, ZERO.

00 02 04 39 LMP Funny how slow you think up here.

00 02 04 41 CDR There they go.

00 02 04 42 CMP ...

00 02 04 50 CDR It just takes you a while to get going, that's all.

00 02 04 52 LMP It does.

00 02 04 54 CDR ...

00 02 05 00 CMP It's not a natural environment, my friend. You haven't been here before. Neither has anybody else, for very long. Get that freaker in there somehow or another, where it's going to stay - until somebody ... it - -

00 02 05 13 CDR You're not going to leave it there for TLI, are you?

00 02 05 15 LMP Oh, no, I just want to set it there, now. I want - I got to figure out what I got to do, so I'll be ready.

00 02 05 21 CDR ..., how about radiators, water ... and all those - -

00 02 05 25 LMP I'll check - I'll check them again. Put that in there.

00 02 05 34 CDR Hey, you got some room to put some goodies up in your place? How about putting this lunar landmark map up - up there in the stowage place?

00 02 05 41 CMP Yes, that's a good idea. ...

00 02 05 43 CDR Get all that in ... in the overhead right now. ... check the --

00 02 05 46 CMP Put that up there.

00 02 05 47 CDR EDS POWER; TRANSLUNAR INJECT. EDS POWER is ON.

00 02 05 52 LMP Here's a couple more.

00 02 05 53 CDR Yes, all right.

00 02 05 54 LMP If you want to get out the card book, I'll get out the proper card.

00 02 05 58 CDR For what?

00 02 06 00 LMP For TV and stuff.

00 02 06 02 CMP What cards are that? Do you have cards for TV?

00 02 06 04 LMP For that camera and stuff. You've got to start taking pictures.

00 02 06 07 CMP Okay.

00 02 06 13 LMP ...

00 02 06 16 CDR ... bright ... and I'm at the same place on that card as I am in this book.

00 02 06 25 LMP See if we got any other place ...

00 02 06 28 CMP You want any other ... - here it is.

00 02 06 30 LMP ... that card? Yes. Let me have the - the burn card.

00 02 06 36 CMP What burn card?

00 02 06 37 LMP SPS burn.

00 02 06 38 CMP Here, you play with this.

00 02 06 39 LMP All right, I will, but I'll hand it back to you.

00 02 06 44 CMP All right, what's the cabin stabilizing at?

00 02 06 46 LMP The third light - -

00 02 06 47 CDR It's down to 553, now.

00 02 06 50 CMP I know what it looks like.

00 02 06 51 LMP What did we say we're going to stabilize at?

00 02 06 54 CDR 4.9 or something?

00 02 06 55 CMP Had a rate valve that was high.

00 02 06 58 LMP Boy, I heard that ...

00 02 07 01 CDR That was the last thing I heard.

00 02 07 03 LMP That was the last thing I heard, too, because that was about the time all the lights came on. I was saying to myself at the time, "Bean, you're sure cool to notice that." Right on schedule, I was watching it at 25 seconds.

00 02 07 14 CMP You were really proud of yourself, huh?

00 02 07 15 LMP Oh, it was great up to there (laughter). I got to go back - -

00 02 07 20 CDR Well, we got everything back, gang.

00 02 07 21 LMP - - I got to go back for a second ride just to see oops again (laughter).

00 02 07 27 CMP If there's one like that again, I don't think you'll really want to go back, do you?

00 02 07 31 LMP (Laughter) It didn't bother me that badly.

00 02 07 34 CDR There was nothing you could do; you were just a ..., I told you I was ... at the time. What else do you need, Al?

00 02 07 41 LMP That's it, I - -

00 02 07 42 CMP You can throw that bag away then, pal. Get rid of it.

00 02 07 43 LMP Make sure that's all of it.

00 02 07 45 CDR I knew we were going in - I don't even think - Dick Gordon said something about that tower, and I was still watching.

00 02 07 51 CMP You see that tower go up, that's - -

00 02 07 52 CDR Yes. Yes, I kind of glanced up and saw that disappear.

00 02 07 56 LMP I looked out some on the launch to see it.

00 02 07 58 CMP I didn't know where we were, what we were doing; I just knew that 3:18 was time to get rid of the tower (laughter).

00 02 08 09 CMP Listen, I hope I got everything locked up, gang. I won't vouch for it.

00 02 08 15 CDR That'll make it - (Laughter) That'll give them something to write about tonight (laughter).

00 02 08 19 LMP Boy, there's a lot of it.

00 02 08 20 CMP Yes.

00 02 08 21 LMP ... starch.

00 02 08 24 CDR Hey, where did all that come from?

00 02 08 25 LMP What's that?

00 02 08 27 CDR Well, you just bent over and some real nice cold air - Is it coming out of your suit? Yes. Oh, man, is that nice!

00 02 08 32 LMP You like that, huh?

00 02 08 33 CDR Yes.

00 02 08 36 LMP When - when do we do TLI?

00 02 08 39 CDR TLI comes - Time base 6 comes - -

00 02 08 42 LMP I'm going to leave this chair flat.

00 02 08 44 CMP Shoot; 2 hours and 6 minutes ago, you'd have been satisfied with a safe abort. Now, you want to do TLI.

00 02 08 49 LMP The what abort?

00 02 08 51 CMP (Laughter) Safe abort.

00 02 08 52 LMP Oh, safe abort.

00 02 08 53 CDR Time base 6 starts at 02:37:42.

00 02 08 56 CMP Hey, we're almost there now. You want to use this handy-dandy little program in the computer?

00 02 09 01 CDR Might as well.

00 02 09 02 CMP And get all good things done?

00 02 09 03 CDR I'm down at - I'm down at Carnarvon AOS 02:25, where I push in the DIRECT ULLAGE breakers; I got the event timer set to 51, and then the ... --

00 02 09 12 LMP ... stay up there or what?

00 02 09 13 CDR No.

00 02 09 14 CMP Al, baby, you put that in BLOCK.

00 02 09 15 LMP I can't - I can, now that I've cleaned out some of that junk.

00 02 09 18 CMP ... back to 296.

00 02 09 21 LMP Light flash, what's all that junk, ...

00 02 09 27 CDR You sure don't hear those service module engines, but you --

00 02 09 29 LMP I see - you see those RCS flash; there's another one.

00 02 09 32 CDR That's got to be the S-IVB.

00 02 09 34 LMP Yes. Everybody said they saw them.

00 02 09 37 CDR I got a bunch of stars out my window, now. Let me see. Anybody I recognize? Upside down, looking out --

00 02 09 45 CMP That's the problem. I don't know what attitude I was in.

00 02 09 48 CDR Looking south.

00 02 09 49 CMP I couldn't believe all that. ... looking - looking ...

00 02 09 56 LMP Why don't we get some string ...?

00 02 09 59 CMP You want some - you want some string?

00 02 10 01 CDR I want ...

00 02 10 04 CMP Yes. Wait until after we get on the --

00 02 10 05 LMP -- just kidding, of course, right this minute, but --

00 02 10 07 CMP -- get on to the - to the LM.

00 02 10 08 LMP -- get this out.

00 02 10 09 CDR Hey, you know, this is neat. Oh, boy! That was a big one.

00 02 10 11 CMP What was that? Lightning flashing on the ground?

00 02 10 12 CDR No. It's - it's the APS.

00 02 10 14 CMP Oh, the APS.

00 02 10 16 CDR It looks funny, because you - Does look like you're horizontal, doesn't it? There's Capella.

00 02 10 26 LMP ...

00 02 10 36 CDR Hope the camera's ready. ... launch with that eight-ball.

00 02 10 42 LMP Yes.

00 02 10 44 CMP And all those lights on.

00 02 10 45 CDR (Laughter)

00 02 10 46 CMP I couldn't believe it.

00 02 10 47 LMP Yes.

00 02 10 48 CMP I couldn't even read the pan - the panels. Hell, I said everything's on, Al --

00 02 10 50 LMP You know one of my first --

00 02 10 51 CDR - - I said you got everything.

00 02 10 53 LMP I figured what had happened is that the command module had separated from the service module electrically. Something like that, I mean, you could ...

00 02 11 02 CMP We're off a little.

00 02 11 04 CDR Yes, I wandered off in yaw just a little.

00 02 11 07 LMP I wonder why they never gave us that one before.

00 02 11 09 CMP Yes. SIM SUPE never gave us that, at all.

00 02 11 11 CDR I don't think they ever expected ... - -

00 02 11 14 CMP They never imagined, ...

00 02 11 16 LMP The batteries didn't go, my circuits - -

00 02 11 18 CDR I'll bet - I'll bet they - -

00 02 11 19 CMP I didn't give you your PAD for that thing, did I, Al?

00 02 11 22 LMP What PAD, Dick?

00 02 11 23 CMP Your PAD.

00 02 11 24 LMP Yes. I didn't take it, because I was trying to get some other things done.

00 02 11 26 CMP Yes, mine was ...

00 02 11 28 LMP We're supposed to - How far are we from TLI?

00 02 11 30 CMP An hour and 20 minutes.

00 02 11 32 CDR No. We got longer than that. We're in 6, time base 6.

00 02 11 35 LMP Okay. I'm going to take time to look over these circuit breakers a little bit.

00 02 11 38 CMP Hey, guys, I need a PAD because - -

00 02 11 40 CDR What do you need?

00 02 11 41 CMP Well, I want to use that - use that thing for my ...

00 02 11 46 LMP Okay. You want a countdown on this?

00 02 11 47 CMP Well, let me read it to you. Where is it?

00 02 11 50 LMP Let me give you the PAD, right here.

00 02 11 51 CMP There's that tuning fork again.

00 02 11 53 LMP Let me turn to the proper page, here.

00 02 11 54 CDR I wish somebody could check down in that LEB ... before ...

00 02 11 58 LMP I'll go down there - -

00 02 12 00 CDR No. No, you don't have to do that.

00 02 12 01 CMP Why don't you stick around, here - -

00 02 12 02 CDR Wait until after the TLI.

00 02 12 04 MS ...

00 02 12 05 CMP Hey, wait a minute. Hang on. Get back here. You got your belts all messed up, you got your ... Here you go.

00 02 12 12 CMP What you got these pamphlets here for?

00 02 12 14 LMP I don't know.

00 02 12 15 CDR What do you need on the PAD, Dick? Time base 6 - -

00 02 12 18 CMP I need - -

00 02 12 19 CDR - - starts at 2 hours 37 minutes and 43 seconds.

00 02 12 22 CMP 37. Boy, we're coming ..., now.

00 02 12 25 LMP Okay. Things look good here, gang. I need that, now. Look at that a little bit.

00 02 12 35 CDR (Yawn) ...

00 02 12 36 LMP What ...

00 02 12 37 CDR ... any more stumbling blocks, today.

00 02 12 38 LMP TLI and get the LM out.

00 02 12 40 CDR (Laughter)

00 02 12 45 CMP And we got a couple of P22's to worry about, too.

00 02 12 53 LMP Oh, you got a problem. Got to keep this AUTO optics running. If you don't - -

00 02 12 59 CMP I don't - I hope we don't dump the platform any more.

00 02 13 02 LMP Yes. Let's concentrate on that.

00 02 13 08 LMP What are you doing down there, Dick?

00 02 13 11 CMP ...

00 02 13 13 CDR Hey, Dick Gordon.

00 02 13 14 CMP What?

00 02 13 15 CDR What do you want to do, start this COAS, Dick?

00 02 13 19 CMP No, no - In that - in that and the optics ..., I want to look at this. ... get the whole field of view. ... There he is, the belt was right up the very edge of it.

00 02 13 28 CDR Okay.

00 02 13 29 CMP And the ... goes down here, and then ...

00 02 13 35 CDR ... down in the center of ...

00 02 13 36 CMP Yes.

00 02 13 37 CDR You hate to look at in the daytime.

00 02 13 40 CDR Dick, you want - you want to start this program, now?

00 02 13 41 CMP Not - not - not particularly. No.

00 02 13 43 LMP You want to take this - Did you all take off the ...?

00 02 13 46 CDR No. Hell, just leave everything where it is. We can clean up this whole thing when we get the LM out and get on our way.

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00 02 13 52 LMP That's a good idea.

00 02 13 53 CDR We got until 5 o'clock tomorrow morning.

00 02 13 56 LMP Here, take the flight plan. Let me put that up.

00 02 14 00 CDR Is that in the right place?

00 02 14 02 LMP I don't know.

00 02 14 07 CMP I wonder if that erasable program got wiped out?

00 02 14 10 MS ...

00 02 14 14 LMP I wonder why it took the fuel cells.

00 02 14 17 CMP Just disconnected them, that's all it did.

00 02 14 19 LMP But why and nothing else?

00 02 14 21 CMP I don't understand that either.

00 02 14 22 CDR We must have gotten some horrendous spike on some ...

00 02 14 25 LMP That must have been what done it. They're both spiking simultaneously. Because you know, if you spike one up, it takes the fuel cell off the other.

00 02 14 33 CDR Yes, and if you spike both of them, you got the whole shooting match. I think we just gave off a big static electrical discharge that just drained the spacecraft for about 2 seconds' worth of power, you know, and then it just fell off.

00 02 14 49 CMP That must have been it.

00 02 14 51 LMP ...

00 02 14 53 CDR I imagine they can sort it out on their telemetry, Dick.

00 02 14 54 CMP Sure they can.

00 02 14 55 CDR They'll see what - They'll know when those things came off.

00 02 14 58 LMP ...

00 02 15 01 CMP I don't like this strap in the way up here, Al.

00 02 15 02 LMP Well, let's move it.

00 02 15 03 CMP How about getting locked in for TLI?

00 02 15 06 LMP I thought we had an hour or something or more.

00 02 15 08 CMP Would you believe that TLI is at - at 2 - Time base 6 is what? 02:36?

00 02 15 15 CDR Seven.

00 02 15 16 CMP 02:37, so mine ... about 02:47.

00 02 15 19 LMP When are we going to start - when do we start burning? Nine minutes later?

00 02 15 23 CDR Nine minutes after 02:37. 02:46.

00 02 15 28 LMP Do we have ground at ...?

00 02 15 32 CDR We got to; we never got a GO.

00 02 15 34 CMP Did you copy the - -

00 02 15 35 CDR Carnarvon at 2 plus 25.

00 02 15 38 CMP Did you copy these - the torquing angles anywhere?

00 02 15 40 CDR I have them ready to give to the ground, right here.

00 02 15 42 CMP Okay.

00 02 15 44 CDR I think we roll first.

00 02 15 46 CMP Oh, no, you're right. I'm sorry; I didn't see them ...

00 02 15 50 LMP Hey, Dick, let me look at your book a minute, please.

00 02 15 54 CMP ...

00 02 15 55 LMP Okay, Dick. ... you look at yours, and I'll just make sure I got all these things put away.

00 02 16 01 CMP ... settling back in your couch, get your chair the way you want it.

00 02 16 06 LMP That's what I'm doing right this second.

00 02 16 08 CDR You want this card up here any more?

00 02 16 10 CMP No.

00 02 16 11 CDR I even glanced at that baby. I said, "I can't believe that card's up there and that AC BUS 1 light's on" (laughter).

00 02 16 20 LMP What a way to start.

00 02 16 23 CDR There's a better way.

00 02 16 24 LMP Yes.

00 02 16 26 CDR Let's hope nothing's wrong with the LM or anything, ... that baby protected - -

00 02 16 31 LMP Protected, yes.

00 02 16 32 CDR - - it has no power on it whatsoever, now.

00 02 16 34 CMP Why?

00 02 16 35 CDR Well, the umbilical drops out; and, when the umbilical drops out, it - it - it - it just goes dead on power until we get in.

00 02 16 40 CMP Yes.

00 02 16 41 CDR Yes - It doesn't have - it doesn't get battery power from the S-IVB. I thought it did, but it doesn't. Right, Bean-o?

00 02 16 48 LMP That's exactly right; it doesn't.

00 02 16 50 CMP It's running on internal batteries right now, on low voltage.

00 02 16 52 CDR Yes, it's running on internal batteries.

00 02 16 55 CDR Uh-oh.

00 02 16 56 CMP What's the matter?

00 02 16 58 CDR ... falling off the line ... battery.

00 02 17 01 LMP Yes, they can. They get in that automatic disconnect --

00 02 17 04 CDR Hey, they've got automatic disconnect just like those fuel cells. It's not like - it's not like this thing, here. We got those ... controls and everything.

00 02 17 11 CMP ... circuit breakers out of there. ...

00 02 17 14 CDR What would that mean?

00 02 17 16 LMP That would mean that your IMU wouldn't be as good as you thought, but I guess we've - -

00 02 17 21 CDR I mean when we put power back on, we'll get power back on even if those ECAs dropped out, wouldn't we?

00 02 17 26 LMP Yes. ... haven't thought of it yet.

00 02 17 35 CDR When we undocked here, I guess we need to look at that to make sure that all these things are right for undocking. Nobody's been separating that stuff.

00 02 17 47 LMP ... don't know.

00 02 17 55 CMP TV camera's ready to go.

00 02 17 57 CDR Okay, I can eat my sandwich.

00 02 18 05 CMP High gain antenna angles are ... verify operation ... - right after we turn around.

00 02 18 16 LMP Our RCS looks all right.

00 02 18 18 CDR Look at that EL; it's pink.

00 02 18 21 LMP I'm going to look out the window and ...

00 02 18 25 CDR Turned everything out? Okay.

00 02 18 26 CMP Turned everything down.

00 02 18 27 LMP Everything looks good to me.

00 02 18 30 CDR ...

00 02 18 50 LMP ... out there.

00 02 18 52 CMP Have you checked the COAS, Pete?

00 02 18 54 CDR I didn't check that it works, but I'll turn it on right now and give - yes, zap, does it work! Whew! ... down. Super. There you go.

00 02 19 03 LMP Is that on zero? Set it on zero. ...

00 02 19 09 CDR It's set on zero, and I presume I got it in the right detent.

00 02 19 16 CMP ...

00 02 19 19 CDR COAS POWER, OFF. Boy, these struts are really loose in here, look at them.

00 02 19 25 CMP Yes.

00 02 19 26 CDR ... no way ...

00 02 19 32 LMP Boy, there's no doubt in your mind when that thing lifts off. That bitch hauls out.

00 02 19 36 CDR That's what it's supposed to do.

00 02 19 38 LMP It does. God!

00 02 19 39 CDR It seems like it took them a year to say "Tower's clear," though.

00 02 19 42 LMP You were counting the seconds; I was watching the clock.

00 02 19 45 CDR Yes, they called it way late.

00 02 19 47 CMP Yes, about 12, 13 seconds --

00 02 19 48 CDR Roll program didn't begin until 32 seconds, either.

00 02 19 52 LMP Man alive, but it --

00 02 19 53 CMP Yes, it ...

00 02 19 54 CDR ... I looked at my clock; it said 43 minutes 15 seconds, and it was stopped. Big deal.

00 02 20 00 CMP This one was still running ... rolling right along. We took it at 2 ...

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00 02 20 08 CDR I'd sure like to have somebody standing down there in the LEB and see whether it says it on that other clock. It'd make me feel a lot happier.

00 02 20 15 CMP ... check it. ...

00 02 20 23 CDR I'm going to have to force myself to get back to my old habits and relax.

00 02 20 27 CMP Yes.

00 02 20 28 LMP Hand me that book a minute; I'll give it back to you.

00 02 20 31 CDR Doing that, Al?

00 02 20 32 LMP Not yet.

00 02 20 33 CDR Just relax your - Turn loose. You can go to wherever your normal park position is.

00 02 20 40 LMP Yes, you do, you've got a different place. ... over my head.

00 02 20 50 LMP Get that S-IVB broke in.

00 02 20 52 CDR Glad your IU didn't glitch with it.

00 02 20 55 LMP That would have been something.

00 02 20 57 CMP ... PAD.

00 02 20 59 CDR You know, an interesting thing - What's our oxygen? 60/40?

00 02 21 04 CMP Yes.

00 02 21 05 CDR That the way we lifted off?

00 02 21 06 CMP Yes.

00 02 21 07 CDR Well, you know that thing happened right around the time for CABIN RELIEF.

00 02 21 11 LMP ...

00 02 21 14 CMP How come that?

00 02 21 15 CDR I don't know. Was that a water ...?

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00 02 21 17 CMP ... supposed to do that.

00 02 21 19 CDR What's the cabin?

00 02 21 21 CMP ... 15 seconds - -

00 02 21 22 LMP Hey, we're venting the cabin, aren't we?

00 02 21 24 CDR We're venting the cabin. The vents are open.

00 02 21 27 LMP Yes, but we shouldn't be doing that, should we?

00 02 21 28 CDR Yes, because it's now fallen down to where the - the - -

00 02 21 32 LMP We'll make it up - -

00 02 21 33 CMP ... starting to pick up the REG now, isn't it?

00 02 21 35 CDR Yes, your WASTE VENT's open and - and that's normal to get the O₂ HIGH FLOW in flight - -

00 02 21 39 CMP Yes. Yes. You ... - -

00 02 21 45 CDR You've got the WASTE VENT open down there, and this is how we're purging the cabin. Okay?

00 02 21 49 CMP Yes.

00 02 21 50 CDR It happens to everybody.

00 02 21 51 CMP Yes.

00 02 21 53 CDR Except we can record that it happened at 02:21:30. Dick, did we - -

00 02 22 01 CMP Here, reading the oxygen at - that come out before, we still bleeding off?

00 02 22 04 CDR Yes. It's bleeding off.

00 02 22 07 MS ...

00 02 22 08 CMP ... regulate right at the 5 - 5 point - -

00 02 22 12 CDR Somewhere after TLI, I know I get down there and turn that baby - that WASTE VENT off.

00 02 22 16 CMP And I'll get them off ... - I'll get them off with the circuit breakers and you get over on ...

00 02 22 32 CMP Yes, you close it after we get out of - do TLI.

00 02 22 38 CDR Man, I recognize - Oh, there's my old buddies, Alpha and Beta Centaurus - Southern Cross. There's the Magellanic Cloud ...

00 02 22 52 CMP There you go. Did you align the GDC after I - -

00 02 22 58 CDR Yes. After the platform.

00 02 23 04 LMP ... read out my - -

00 02 23 06 CMP All right. I'm going to wait until we get Carnarvon; see if they want to do anything to the DSKY before I put the erasable figures in there.

00 02 23 11 LMP Okay.

00 02 23 12 CDR You want the lights on, now?

00 02 23 13 CMP No. Wait until ...

00 02 23 23 CDR Man, those thrusters are bright.

00 02 23 25 CMP That the APS?

00 02 23 26 CDR ...

00 02 23 27 LMP I thought it was the APS RCS check.

00 02 23 31 CDR No.

00 02 23 33 CMP Here, Al Bean. ... getting ...

00 02 23 51 CDR Okay, and the other thing is, I got to remember to get hot on those propellant valves.

00 02 23 55 CMP Yes. ...

00 02 24 03 CMP Why don't we have - I thought - we want those ... ?

00 02 24 07 CDR No. You want the lights up? You want them up?

00 02 24 08 CMP Yes. Sure - -

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00 02 24 09 LMP Then let's have them up.

00 02 24 11 CMP Check those after we get off ...

00 02 24 15 CDR Okay. There we go; we got S-band signal. ... lock these fellows in. ...

00 02 24 26 CMP You did align the GDC?

00 02 24 27 CDR Yes. I'm going to DIRECT ULLAGE breakers in, right now.

00 02 24 32 CMP ...

00 02 24 33 CDR One.

00 02 24 34 CMP ...

00 02 24 35 CDR Two.

00 02 24 36 CMP ...

00 02 24 37 CDR The event timer's still set at 51, and I'm beginning to get monitoring for time base 6. CMP to the couch. I'm waiting for all this good stuff to start.

00 02 24 46 CDR Hello, Houston; Apollo 12 over Carnarvon.

00 02 24 50 CC Apollo 12, Houston. Loud and clear.

00 02 24 53 CDR Roger. I got some torquing angles for you.

00 02 24 56 CC Roger. Would you do some work for us? TAPE RECORDER, OFF, and HIGH BIT RATE.

00 02 25 01 CDR All right. TAPE RECORDER, OFF.

00 02 25 05 CMP Try again, Al, now.

00 02 25 06 CDR ... Okay, gang, ... - -

TIME SKIP

00 02 34 40 CDR Doesn't that make you nervous?

00 02 34 44 LMP Oh, I see; I was upside down.

00 02 34 47 CMP Yes. Everybody's upside down - -

00 02 34 48 CDR We're - we're upside down. We're going around the world upside down.

00 02 34 52 LMP Yes. The block's on the top, that's all.

00 02 34 55 CDR What happened, Dick, is beyond my comprehension.

00 02 34 57 CMP It's going to be fantastic.

00 02 34 59 CDR We're all on our own. Okay. How's your - Hey, I've got my - REPRESS shows OFF. That's what it's supposed to be. Service module -

00 02 35 09 LMP It looks to me like the radiators and everything are working real well, Pete.

00 02 35 14 CDR Glad something's working.

00 02 35 19 CMP Really got to be careful you don't move the wrong switch ... switch ...

00 02 35 22 LMP ... Yes, sir.

00 02 35 24 CMP I want to get comfortable for a one-g ...

00 02 35 29 CDR No, it takes a while to get to one g, Dick.

00 02 35 32 CMP Huh?

00 02 35 33 CDR Start out about three-quarters of a g. You get settled when you get ullage on.

00 02 35 37 CMP Yes. I was just trying to see where my head was going to go.

00 02 35 40 CDR Okay, 2 minutes 30 seconds. I'm surprised that the Sun is as far out on my left as it is.

00 02 35 52 LMP I am, too. ...

00 02 35 54 CMP You got the - you got the EMS all set, huh? ... - -

00 02 35 56 MS ...

00 02 35 57 LMP You bet. The EMS is all set.

00 02 35 59 CDR I can't hardly read it.

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00 02 36 00 LMP I know it.

00 02 36 01 CDR I got it up full bright. We got that lower shield around anywhere?

00 02 36 04 LMP Yes, we just put it away.

00 02 36 06 CDR Well, forget it. Hey, where are we now - where - where - exactly where are we?

00 02 36 13 CMP ... Well, we're waiting for those lights to come on.

00 02 36 16 LMP We're - we're waiting ...

00 02 36 17 CDR ... VERB 24? We just passed Australia.

00 02 36 19 CMP Oh, ... I missed Australia.

00 02 36 22 CDR All right. We got 1 minute --

00 02 36 23 LMP ... not far enough ...

00 02 36 25 CDR -- We got 1 minute and 20 seconds, here, to S-II light on. I got to get ready to start on this. Up, start, even, even, 51. Okay.

00 02 36 35 CMP You don't start until you get ...

00 02 36 37 CDR Light off.

00 02 36 39 CMP Light off.

00 02 36 44 CDR Lights are going to come on at 58 - Hey, it's going to be interesting to see whose pulse peaked out the most on that one. Man, I wouldn't - I wouldn't vote for mine at all. It probably hit 230 at --

00 02 36 56 LMP Mine - They're all that high.

00 02 36 57 CMP Mine - mine was probably right up there.

00 02 36 59 LMP I'll bet it was because you looked up there ...

00 02 37 00 CMP Oh, I couldn't believe that.

00 02 37 01 LMP Nobody even read them. They were so --

00 02 37 02 CDR I said, "Al, they're all on."

00 02 37 04 LMP (Laughter) You know it's funny; all the simulating we've done, and they don't give us what we got up here.

00 02 37 11 CDR They got to quit doing that (laughter).

00 02 37 13 CMP They didn't give us that, either. They didn't miss ...

00 02 37 17 LMP Not my - Wasn't our fault. It wasn't my fault they missed it.

00 02 37 20 CDR ... I got - I got to hear those voice tapes off the DSE - -

00 02 37 23 LMP That's got a - -

00 02 37 24 CDR - - They got to be spectacular because ... they'll be half voltage. (Laughter) ...

00 02 37 30 LMP We got voltage on the buses ... - -

00 02 37 32 CDR Quite (laughter).

00 02 37 33 LMP I didn't want to touch anything.

00 02 37 34 CDR I know you didn't.

00 02 37 35 LMP Man, I was - I wanted to get up and - I was trying to keep ...

00 02 37 38 CDR ... Don't make it move because we're still flying.

00 02 37 43 CMP Here we go.

00 02 37 45 CDR Light on.

00 02 37 47 CMP 10 seconds, that light should go out ... got time base 6 ...

00 02 37 53 LMP Okay.

00 02 37 56 CDR Okay, I'll get the clock running.

00 02 38 00 CMP ... light on.

00 02 38 02 CDR Yes.

00 02 38 06 CMP Okay.

00 02 38 12 CDR ...

00 02 38 20 LMP That's got it. ...

00 02 38 24 CDR All right.

00 02 38 25 CMP Okay.

00 02 38 26 CDR Time base 6, 51; start DET; SPACECRAFT CONTROL, check, SCS - -

00 02 38 29 CMP Hey, Pete. Let me read this to you.

00 02 38 31 CDR Yes, well, I'll read it with you; go ahead.

00 02 38 34 CMP SCS, monitor the tanks. DELTA-P, 36, 26, and watch your DSKY.

00 02 38 39 CDR Okay, they're 36, 26 - -

00 02 38 41 CMP That what you're talking about?

00 02 38 42 CDR Yes.

00 02 38 44 CMP UP TELEMETRY, BLOCK, the command module; and UP, BLOCK, the IU.

00 02 38 49 CDR Okay.

00 02 38 50 CMP ORDEAL, 300/LUNAR.

00 02 38 51 CDR Okay.

00 02 38 52 LMP Hey, we're in TRANSLUNAR INJECT, aren't we?

00 02 38 54 CDR Yes.

00 02 38 55 LMP Okay.

00 02 38 56 CDR Yes. 300 and it's LUNAR.

00 02 39 00 CMP Sure it's LUNAR? Double sure?

00 02 39 01 CDR Yes, yes.

00 02 39 02 CMP Better make sure it's LUNAR ...

00 02 39 04 CDR Yes. 300.

00 02 39 06 CMP Okay, and ball 1 is ORB RATE and ball 2 is - -

00 02 39 09 CDR ORB RATE, INERTIAL. Okay, now what do you want to do?

00 02 49 14 CMP ... 57.

00 02 39 16 LMP Slew FDAI?

00 02 39 17 CDR No. I got to get a whole PAD, first.

00 02 39 22 LMP You ought to look out the window.

00 02 39 24 CDR Yes, you better, you ain't going to see it again for a while. Start climbing away from it, here. Hey, it's great. They got little holes on about the ninth - eighth day. Quiet, isn't it?

00 02 39 42 CMP Yes. You move fast.

00 02 39 43 LMP A lot faster than I thought.

00 02 39 44 CDR Yes.

00 02 39 45 CMP Really whistling along. Times goes. ...

00 02 39 55 CDR All right.

00 02 39 59 LMP You feel okay in your stomach and everywhere?

00 02 40 00 CDR Who, me?

00 02 40 01 LMP Yes.

00 02 40 02 CDR I'm hungry.

00 02 40 03 CMP I am, too.

00 02 40 04 CDR I'm starving to death.

00 02 40 05 CMP I'm thirsty.

00 02 40 06 CDR I just - I want - I want to take it easy. Wait until we get in that LM. We got all the rest of the day to chow down, get out of our suits - -

00 02 40 15 LMP Put all that stuff in the right place.

00 02 40 16 CDR -- set up PTC.

00 02 40 18 LMP Sure. ...

00 02 40 21 CDR 3 53. Seven minutes until TLI.

00 02 40 25 CMP The GDC off that far?

00 02 40 27 CDR Yes, it's really bad in yaw. Am I aligning here, anywhere?

00 02 40 34 LMP No, I don't see those, Pete.

00 02 40 35 CDR It really jerks in yaw, Dick. Look at that son of a gun, huh? I'm about a half degree out in yaw, here, and that thing's about 3 degrees off in yaw.

00 02 40 44 CMP We can get it after your ... --

00 02 40 45 LMP You know, it's funny; we've been sitting in here and not looking out, I feel like I'm kind of halfway upside down.

00 02 40 49 CMP Yes. Your head's full. You feel like you've been on your feet all day.

00 02 40 52 LMP That's what I feel like; I feel like I'm kind of --

00 02 40 53 CDR Well, that's because you're never - never - in zero g in the airplane long enough that you - your --

00 02 40 59 LMP Blood can ...

00 02 41 00 CDR -- your heart's pumping --

00 02 41 01 LMP Yes.

00 02 41 02 CDR -- blood to your head at a - you know - at a --

00 02 41 03 LMP Higher pressure.

00 02 41 04 CDR -- higher pressure than it could normally do it, see, and you get - you'll - you'll get rid of that about tomorrow.

00 02 41 10 CMP It'll come back ... Where are we on the clock?

00 02 41 17 CDR 53:58.

00 02 41 19 CMP Better get my hand over here where I can - You can see about as well on the - I'll get that pulled down a little bit.

00 02 41 27 LMP I'm kind of floating - on a new astronaut, that's pretty hard.

00 02 41 32 CMP That's bad.

00 02 41 34 CDR Yes.

00 02 41 39 LMP Okay.

00 02 41 40 CDR There's an island down there.

00 02 41 42 LMP Yes? Where?

00 02 41 43 CDR Right - right - We're going to pass over it in just a second. You can probably see it out Dick's window. Two of them, three of them.

00 02 41 49 LMP Oh, yes. Yes, yes. Beautiful.

00 02 41 53 CDR Probably passing over the Fiji's.

00 02 41 55 CMP Yes, I wouldn't be surprised - -

00 02 41 57 LMP ... on one of those.

00 02 41 59 CMP Somewhere down in there.

00 02 42 02 CDR Black; isn't that sky black?

00 02 42 04 LMP Yes, it's black.

00 02 42 17 CDR Okay. 50 - 54, 55 - 55 minutes - -

00 02 42 30 CMP And you slew to 15.

00 02 42 33 CDR Yes, I'm going to slew to 15, right now. Hold fast, loop - I just want to slew up a little bit, and see what I can get in the ballpark, here.

00 02 42 55 CDR We go - Where do we go FDAI, ORB RATE?

00 02 42 58 CMP Right there at first.

00 02 42 59 LMP Gee, it's 2 o'clock already.

00 02 43 00 CMP Right at ignition.

00 02 43 01 LMP Huh?

00 02 42 02 CDR Doesn't say anything about that in here.

00 02 43 04 CMP ORB RATE. 59:59.

00 02 43 08 LMP I didn't get that.

00 02 43 09 CDR Let me know when it's 59.

00 02 43 12 CMP Right there, ..., it's right there. Right at burn. 59:59, start ORDEAL torquing.

00 02 43 19 CDR Let me know when it's 59, would you, Dick?

00 02 43 21 CMP Yes.

00 02 43 22 CDR It's 56.

00 02 43 23 CMP 56. Yes. Okay.

00 02 43 25 ARIA Apollo 12 ...

00 02 43 26 CMP It's ARIA.

00 02 43 27 CDR Okay, ARIA. We hear you breaking up very badly. It's Apollo 12. How do you read, Houston?

00 02 43 32 LMP Your gain's down. They haven't locked on, yet, Pete. There, it's coming in.

00 02 43 39 CDR Poor guy's out in the middle of nowhere, isn't he?

00 02 43 40 CMP Yes.

00 02 43 42 LMP At 58, I'm supposed to go HIGH BIT RATE and all that. What time is it now?

00 02 43 45 CMP 56:20.

00 02 43 46 LMP Okay.

00 02 43 48 CMP I'll read them out to you, Al.

00 02 43 50 LMP Okay. ...

00 02 44 01 CDR You ENTERed, didn't you - -

00 02 44 02 LMP No. No. Just standing by to ENTER, Pete. Exactly 57.

00 02 44 19 CDR (Laughter) I can't ... Every time I close my eyes, all I see are all these lights go on.

00 02 44 26 LMP Go ahead, ENTER.

00 02 44 27 CMP 57:15, ... reading on the ball.

00 02 44 29 LMP Check bias at 15 degrees; it is on the ball. I don't have to do a thing.

00 02 44 34 CDR Okay. At 58, we want a NOUN 62 an SCS/TVC SERVO POWER to 1, AC 1/MAIN A, and 2, OFF. And, Al Bean, you give me a TAPE RECORDER, HIGH BIT RATE, RECORD, FORWARD, and a COMMAND RESET.

00 02 44 49 LMP Okay. Standing by.

00 02 44 52 CDR Okay.

00 02 44 53 CMP I'm standing by, too. I'm going to pitch my - -

00 02 44 55 CDR EMS, ON. The - the S-IVB is pressurized.

00 02 45 01 CMP The S-IVB is coming up ...

00 02 45 02 LMP Our PIPA bias looks okay. Good.

00 02 45 08 CMP Is that 110, 110 - -

00 02 45 10 LMP Everything looks good, huh?

00 02 45 11 CMP Not in too bad a shape.

00 02 45 14 LMP That - that - that booster did it, though.

00 02 45 17 CC ...

00 02 45 19 CDR We don't read you too well, Houston. How do you read us?

00 02 45 22 CMP Now 58.

00 02 45 23 CDR Okay.

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00 02 45 24 CMP Our bias is good.

00 02 45 25 CDR TVC SERVO POWER, AC 1, is on AC 1/MAIN A; and at 8-58:20, I'm going to EMS MODE, NORMAL.

00 02 45 34 LMP How about SCS/TVC SERVO POWER number 2?

00 02 45 35 CDR I got to go to OPERATE --

00 02 45 37 CMP How about - monitor V_I at ECO, okay.

00 02 45 41 CDR Okay, Al, you got your --

00 02 45 42 CMP SERVO POWER, AC 1/MAIN A?

00 02 45 44 CDR -- TAPE RECORDER, HIGH BIT RATE, RECORD, FORWARD, COMMAND RESET? EMS MODE is NORMAL.

00 02 45 57 CDR -- MODE. SEP light's on at 36. Okay, S-IVB ullage starts right now. Anybody feeling the ullage?

00 02 46 05 LMP Not yet. Okay, 38, ullage.

00 02 46 09 CMP Are you feeling the ullage?

00 02 46 10 LMP Yes.

00 02 46 11 CDR Pitch should be 7 degrees at the roll - not quite.

00 02 46 14 LMP Okay.

00 02 46 17 CDR Not 7 degrees yet, but it will be at 59.

00 02 46 21 CMP ... 59, gang.

00 02 46 23 CMP MARK. 59.

00 02 46 24 LMP I don't feel any ullage.

00 02 46 25 CMP SEP. Don't worry about it. S-II SEP light out. Not supposed to feel any ullage.

00 02 46 34 LMP Is that right?

00 02 46 35 CMP I don't think we've ... yet.

00 02 46 39 CDR Counting the other way. Why is that counting up? It's counting up instead of down there. Probably

got a - Wait a minute. 59 - should be 42, SEP light out; 55, S-IVB ullage - -

00 02 46 50 CMP ... we got a foot per second in there ... - -

00 02 46 52 CDR Okay.

00 02 46 53 CMP - - -

00 02 46 55 CDR 59:33.

00 02 46 58 CMP Okay.

00 02 46 59 CDR SEP light out at 42.

00 02 47 01 CMP 59:55, FDAO pitch, 3 degrees.

00 02 47 05 CDR Yes, at 55? Got SEP lights out at 42.

00 02 47 09 CMP Okay. That's it, we're on our way.

00 02 47 12 CDR Okay. 59, ullage, and 55, ullage stop - and my engine 1 light on.

00 02 47 19 CMP Pitch is going to be 3 degrees.

00 02 47 21 CDR Engine 1 light's ON.

00 02 47 22 CMP There it is.

00 02 47 23 LMP There it goes.

00 02 47 24 CDR There you go.

00 02 47 25 CMP Okay, settle down.

00 02 47 26 CDR I got the switch in - -

00 02 47 27 CMP ...

00 02 47 28 LMP How do pressures look?

00 02 47 30 CMP Pressures look beautiful. Listen to that baby.

00 02 47 33 CDR Yes. Now, it's steering out to the right just like it always does.

00 02 47 37 CMP You ought to look at it turn ...

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00 02 47 38 LMP That's - that's fine.

00 02 47 40 CMP Well, it's around.

00 02 47 41 CDR Steering right back in.

00 02 47 42 CMP Right back in. Yaw should be zero at 1 minute.

00 02 47 47 CDR Yaw should be zero in 1 minute? Okay.

00 02 47 48 CMP What's the g, about three-quarters?

00 02 47 49 CDR It's reading about three-quarters, yes.

00 02 47 53 CMP And - -

00 02 47 56 CDR Okay.

00 02 47 58 CMP Let's see. One minute, we should have zero degrees' yaw - Velocity looks good.

00 02 48 05 CDR Did you ever key the VERB 62 to time?

00 02 48 07 CMP Oh, okay. I'm sorry ...

00 02 48 09 LMP Not very much you can do, now.

00 02 48 10 MS ...

00 02 48 11 CMP I'm sorry ...

00 02 48 13 LMP My velocity ... - -

00 02 48 14 CDR Stand by for my mark, and we'll be at zero yaw.

00 02 48 17 CMP Okay (clears throat).

00 02 48 18 CDR MARK.

00 02 48 19 CMP Okay.

00 02 48 20 CDR Zero yaw.

00 02 48 21 CMP Fifty-six seconds.

00 02 48 22 CDR And there's 1 minute, and it's sliding out to the left, now. Just going along peachy-keeno. Tank pressures are beautiful.

00 02 48 31 CMP ...
00 02 48 32 LMP ...
00 02 48 34 CDR Al Bean, you're on you way to the Moon.
00 02 48 37 LMP Yes, you all can come along if you like.
00 02 48 40 CMP All right.
00 02 48 41 CDR ..., but that's because I'm --
00 02 48 43 LMP ... NOUN 62.
00 02 48 45 CDR All right, what are our shutdown rules?
00 02 48 47 CMP Six seconds, and it's late.
00 02 48 49 CDR ... 40 on the EMS, is that right?
00 02 48 51 CMP No, no. Six seconds, the FDAI is changed.
00 02 48 53 CDR FDAI is changed.
00 02 48 54 CMP ... reset ... --
00 02 48 57 CDR All right. Now, you tell me what the V_I is.
00 02 48 58 CMP 35.
00 02 48 59 LMP 35.
00 02 49 00 CMP 420. Okay.
00 02 49 03 CDR On a previous shutdown --
00 02 49 09 CMP Should have 87.
00 02 49 10 LMP That's it.
00 02 49 12 CDR Plus 48.
00 02 49 13 CMP ...
00 02 49 15 CDR Yawing out.
00 02 49 16 CMP It's going to go a long ways out.

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00 02 49 18 CDR Yes.

00 02 49 19 CMP ... seconds and - -

00 02 49 20 CDR We're at 2 minutes Dick.

00 02 49 21 CMP Okay.

00 02 49 22 CDR We should - we have about 3-1/2 degrees?

00 02 49 23 CMP Got.

00 02 49 25 CMP H-dot's good; altitude is good - a little high.

00 02 49 28 CDR Okay.

00 02 49 29 CMP Three minutes; we got 2. ..., we're on our way.

00 02 49 34 CDR Coming up towards a g.

00 02 49 37 LMP Looking good.

00 02 49 38 CDR About 5 degrees. Now, I'll give you a hack at 02 plus 30.

00 02 49 41 CMP Okay.

00 02 49 43 CDR And, Al, you can watch the S-band. We ought to lock up over Hawaii here at - -

00 02 49 46 LMP I'm watching it right now.

00 02 49 48 CMP - - ... is coming up.

00 02 49 49 CDR Yes, I hear them, right now.

00 02 49 51 LMP What g's are we pulling?

00 02 49 52 CMP One pitching over, about - -

00 02 49 53 LMP I feel like I'm pulling 50.

00 02 49 55 CDR Oh, one g. ... about 9 - 9.5.

00 02 49 58 CMP Okay, hang on; here we go. Pete, ... give me 02:30.

00 02 50 00 CDR Oh, I'm sorry; we've passed it ... - -

00 02 50 01 CMP Okay, that's good. ...

00 02 50 03 CDR 02:40. I'll give you a 3-minute mark.

00 02 50 04 CMP We're okay. I'll go - I'll go ORB RATE.

00 02 50 08 CDR ... high - a little bit high on the ball - up about 1 degree.

00 02 50 10 CMP Yes. That's good, that's good enough. Supposed to do it for the --

00 02 50 13 CDR Yes.

00 02 50 14 CMP It'll be high; it'll come across.

00 02 50 15 CDR Yes, I know. Looks great. Here comes 3 minutes.

00 02 50 18 CMP Okay --

00 02 50 19 CDR On my mark -

00 02 50 21 CDR MARK.

00 02 50 22 CMP We're right on velocity; we're right on it; we're right on H-dot; we're right on altitude.

00 02 50 25 LMP ... kind of rattling the tops of this ...

00 02 50 28 CMP Yes.

00 02 50 29 CDR That's what it's supposed to do. Okay, we're almost out to 10 degrees in yaw.

00 02 50 32 CC Apollo 12, Houston through Hawaii. How do you read?

00 02 50 35 CDR Roger; loud and clear. It's steaming right down the pike.

00 02 50 45 CDR Okay. Mark at 03:30.

00 02 50 46 CMP Okay.

00 02 50 51 CDR MARK.

00 02 50 52 CMP That's right on the money.

00 02 50 53 CDR Ten degrees.

00 02 50 54 CC Apollo 12, Houston in the blind. Your trajectory and the S-IV both look good.

00 02 50 58 CDR Roger. They look good in here.

00 02 51 00 CC Roger. We're reading you weak but clear now, Pete.

00 02 51 02 CDR Okay. Everything's sticky-poo.

00 02 51 05 CC Good show.

00 02 51 09 CMP Okay, what's the time? Four minutes, please.

00 02 51 12 CDR Okay. I'll give you a 4-minute hack. 5 seconds. What's the ... - -

00 02 51 20 CMP Everything's okay.

00 02 51 21 CDR MARK.

00 02 51 22 CDR Four minutes.

00 02 51 23 CMP Okay. Right on, right on, right on.

00 02 51 24 MS ...

00 02 51 25 CMP - - ... it's gorgeous.

00 02 51 26 LMP We're about 3 miles higher in altitude.

00 02 51 28 CDR Okay. We're at one g, now, Al.

00 02 51 35 CMP Okay, here we go.

00 02 51 37 CDR Hey, that was an absolutely nominal burn time.

00 02 51 41 CMP Five plus 44. I didn't notice that - that ...

00 02 51 46 CDR Huh? Okay, I'll give you a 4 plus 30 mark.

00 02 51 49 CMP Okay. I'll be glad to hear that. ...

00 02 51 51 CDR MARK.

00 02 51 52 CDR Four plus 30.

00 02 51 53 CMP Okay. Velocity's good; H-dot's good; altitude's good.

00 02 51 59 CDR And, Houston, 4 plus 30; everthing's GO in here.

00 02 52 03 CC Roger, Pete. Your cutoff looks nominal.

00 02 52 05 CDR Looks good here.

00 02 52 07 LMP ...

00 02 52 08 CDR That's all right. That's all right. Watch you don't bang it.

00 02 52 11 CMP Watch that - watch that handle.

00 02 52 12 CDR Yes. That's - they're all right. Okay, I'll give you a 5-minute mark? We're up at 15 degrees - -

00 02 52 16 CC ..., Pete.

00 02 52 17 CDR Okay, sir.

00 02 52 18 CMP Five degrees, 5 minutes, Pete.

00 02 52 20 CDR Okay.

00 02 52 21 CDR MARK.

00 02 52 22 CDR Five minutes.

00 02 52 23 CMP 833, 739; we're just a little hot - a little hot.

00 02 52 32 LMP That's good.

00 02 52 37 CDR More pitch there. Pitch is way down.

00 02 52 38 CMP That's good. It'll do that; then it'll come back.

00 02 52 41 CDR Okay. All right.

00 02 52 42 CMP That's the way it's supposed to go.

00 02 52 43 CDR All right.

00 02 52 44 CDR Pitched down about 3 degrees - -

00 02 52 45 CMP Yes, it'll come back.

00 02 52 46 CDR All right.

00 02 52 47 CMP ...
00 02 52 48 CDR I'll give you a 5 plus 30.
00 02 52 50 CMP Okay.
00 02 52 51 CDR MARK.
00 02 52 52 CDR Five plus 30.
00 02 52 53 CMP We're okay. We're right on it.
00 02 52 55 CDR We only got about 400 feet to go.
00 02 52 57 CMP Yes. 35 ... - -
00 02 52 59 CDR 37, 38, 39, 40, 41 - -
00 02 53 03 CMP - - should be shutdown.
00 02 53 04 CDR Boom.
00 02 53 05 CDR SHUTDOWN.
00 02 53 06 CMP ...
00 02 53 07 CDR Okay. All right. Stand by 1 minute.
00 02 53 08 CMP Okay, ... - -
00 02 53 09 CDR Okay. We have shutdown. The EMS reads plus 10.2; the DSKY reads 35413, plus 05003, plus 0191 - -

TIME SKIP

00 03 15 19 CDR PYRO ARM.
00 03 15 20 CMP A is OFF.
00 03 15 21 CDR Okay. We're holding for you to start your clock. It should be - -
00 03 15 25 LMP 34.
00 03 15 26 CDR - - at 17 - -
00 03 15 27 LMP 34.

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00 03 15 28 CDR - - 34.

00 03 15 39 CMP, 99 Bravo. Look at that bias. It's just plain got a drift that won't quit.

00 03 15 44 LMP That's pretty bad.

00 03 15 54 CMP That thing is really bad.

00 03 15 55 CDR It was bad that time.

00 03 16 00 CMP Here we go. ...

00 03 16 02 CDR ... bad. Stand by for an alarm.

00 03 16 11 CMP (Clears throat) I'll get ...

00 03 16 13 CDR Okay, which button you going to use to SEP with? Right there. Want me to SEP for you?

00 03 16 19 CMP CS - CSM/LAUNCH VEHICLE, SEP.

00 03 16 20 CDR Want me to SEP for you? You leave that switch open. I'll give you a two-potato count, SEP. And then, I've got my other hand ... these primary propellants.

00 03 16 30 CMP I'll go ahead and do that.

00 03 16 31 CDR All right, I'll get these propellants on.

00 03 16 33 CMP ... 34. One minute.

00 03 16 35 CDR ...

00 03 16 36 LMP Me, too.

00 03 16 37 CMP CSM/LAUNCH VEHICLE, SEP.

00 03 16 40 CDR That's what I did right then.

00 03 16 42 CMP ...

00 03 16 43 LMP Yes. I agree.

00 03 16 44 CMP Don't ever touch this row up here.

00 03 16 45 LMP Yes.

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00 03 16 46 CDR Yes. Al Bean?

00 03 16 47 LMP Yes?

00 03 16 48 CDR Go help Dick Gordon; I don't know where the Sun's going to be or what's going to happen, but ...

00 03 16 53 CMP Watch - watch this - -

00 03 16 55 CDR I'm going to get those.

00 03 16 57 LMP That's a smart idea, Pete Conrad. Get them out; have them ready ... You read them; I'll give them to him.

00 03 17 11 CMP Put them on my eyes right now, just to keep them out of the way.

00 03 17 19 CDR The launch was almost as good as me getting to fly the SAT V into orbit (laughter).

00 03 17 25 CMP ...

00 03 17 26 CDR Okay, Dick. 17.

00 03 17 28 CMP 34.

00 03 17 30 CDR 34, 30, 31, 2, 3, 4, started. Okay. Now, CMC MODE, to AUTO, at 59:50. Now, I'm going to go ...

00 03 17 47 CMP Yes, ...

00 03 17 48 CDR Okay? Okay, at 50, CMC MODE, AUTO; and, at 58, I went to the plus-X; and, at all zeros, SEP.

00 03 18 05 CDR That's it? You got one quad. That's all okay. Everything's all right. All the quads are gray.

00 03 18 10 LMP Everything's all right. They're checked out.

00 03 18 12 CDR Okay. Helium? That's all of them? All right, HELIUM in A SECONDARY.

00 03 18 19 CC ... SEP, Pete.

00 03 18 21 CDR Okay. We SEP'd. Helium over to B. Watch those - -

TIME SKIP

00 03 19 38 CMP The third panel looks like it's open in the LM,
right behind that RCS thruster.

00 03 19 42 LMP No, that's the - the second. Look at the Earth;
isn't that sharp, Pete Conrad?

00 03 19 48 CMP You - you get the Earth. Let me get a couple more.
We can see the whole United States, Houston.

00 03 19 57 CDR You got it in your window yet, Dick?

00 03 19 58 CC Give us OMNI Bravo, please.

00 03 20 00 CMP I don't have any COAS, either - that - there it is.

00 03 20 03 CDR Okay. ...

00 03 20 04 CMP Yes.

00 03 20 05 CDR All right, let me see, here. I've got the pro-
pellant rate, and the fuel reactor cell's in
NORMAL, Al. Yes.

00 03 20 11 CMP Hey, you guys, what's - Oh, that's not your fault.

00 03 20 13 CDR What's the matter?

00 03 20 14 LMP Nothing, nothing.

00 03 20 16 CDR Okay. You got her. It's all yours, babe. Drive
her right back in.

00 03 20 20 CMP I got to turn on the TV. Okay.

00 03 20 24 CDR I got an awful pretty looking Intrepid sitting
out the window, here, gang - We'll go get her.

00 03 20 30 LMP ... Want me to turn this ... to COMM ... - to turn
this on?

00 03 20 34 CMP Well, you can turn it on any time you want to.

00 03 20 37 LMP Okay, I just thought maybe you had some goodies to ...

00 03 20 39 CMP No - -

00 03 20 40 CDR BMAG MODE, three of them, to ATT 1/RATE 2, Dick.

00 03 20 43 CMP They're there. Right there, okay.

00 03 20 45 CDR SPACECRAFT CONTROL to SCS; MANUAL ATT, ACCEL COMMAND - -

00 03 20 47 CMP Hey, I don't know what you're doing, Pete. VERB 49, ENTER. Got the right numbers?

00 03 20 54 CDR 300, 272, and 28; and that was supposedly the turnaround numbers. And I will double check those right now.

00 03 21 02 CMP HIGH GAIN, minus 20. You've got - -

00 03 21 05 CDR 300, 272, and 28; that's it, Dick. You going to AUTO to it?

00 03 21 10 CMP Yes.

00 03 21 11 CDR All right. VERB 62, ENTER; MANUAL ATT, RATE COMMAND; null translational rates; and I can no longer see the booster, so you got it. And CM - SPACECRAFT CONTROL to C - CMC and BMAG MODE, three of them, to RATE 2 - -

00 03 21 27 CC ...

00 03 21 1 CDR Roger, Houston. BMAG MODE, three, to RATE 2, Dick?

00 03 21 35 CMP Yes, they're RATE 2, Pete.

00 03 21 37 CDR All right. Now, look, have you got - gone to CMC? Huh?

00 03 21 41 CMP Yes. I'm in AUTO maneuver to the docking attitude.

00 03 21 44 CDR You're in the AUTO maneuver to the docking attitude. You did a VERB 49 - -

TIME SKIP

00 03 26 53 CDR Okay. Everything's - everything's sticky-poo.

00 03 26 56 CMP ... match up ... - -

00 03 26 58 CDR We got a hard dock, Houston. She looks good, both barber - I mean both A and B are gray; all latches made.

00 03 27 06 CC Roger, Pete. Looks good.

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00 03 27 09 CDR Okay, now, wait a minute.

00 03 27 10 LMP We don't have much fuel.

00 03 27 11 CMP Oh, you did okay, Dick Gordon.

00 03 27 12 CDR After docking latches have engaged, PROBE, EXTEND; talkback, gray; SECS - -

00 03 27 16 LMP Okay.

00 03 27 17 CDR - - PYRO ARM, SAFE; SECS LOGIC, OFF.

00 03 27 19 CMP Okay, SECS PYRO ARM, SAFE.

00 03 27 20 CDR Yes. Yes.

00 03 27 21 CMP LOGIC's OFF.

00 03 27 22 CDR Okay, just a minute.

00 03 27 23 CMP Keep reading.

00 03 27 24 LMP Cool it; cool it.

00 03 27 26 CDR Oh, good Godfrey, I'll say it's right out there.

00 03 27 29 CMP Is the Earth out there?

00 03 27 30 CDR EDS POWER, OFF.

00 03 27 31 LMP Yes, it's out my side.

00 03 27 32 CMP EDS POWER is OFF.

00 03 27 34 CDR Okay, now. Three EDS circuit breakers, open.

00 03 27 39 CMP Open.

00 03 27 41 CDR DOCKING PROBE EXTENDED/RELEASE to OFF.

00 03 27 44 CMP DOCKING PROBE, OFF.

00 03 27 46 LMP Be sure.

00 03 27 47 CMP Yes.

00 03 27 48 LMP OFF.

00 03 27 49 CDR DOCKING PROBE RETRACT, two, OFF.
00 03 27 53 CMP Two, OFF.
00 03 27 56 CDR cb DOCKING PROBE, two, open - -

TIME SKIP

00 04 13 14 CMP I don't see the booster yet.
00 04 13 16 CDR Below us.
00 04 13 17 LMP ... below us.
00 04 13 18 CDR Yes.
00 04 13 19 LMP Did it go below us?
00 04 13 20 CDR Yes.
00 04 13 21 LMP No, no, no. No.
00 04 13 22 CMP Then how come it went below us?
00 04 13 23 CDR Let Al get -
00 04 13 24 LMP Below the LM. Pull straight back ...
00 04 13 28 CMP Yes, I sure did; it came out of there straight.
00 04 13 29 CDR Okay. Now, - -
00 04 13 31 LMP Did you get a picture of it?
00 04 13 33 CDR No. We - I can't see it.
00 04 13 34 LMP Oh, the TV - -
00 04 13 35 CDR All right, now, let me get working. LM SEP,
5 seconds, thrust aft for 3, Al.
00 04 13 41 LMP Okay, key POO.
00 04 13 42 CMP We SEP'd, Houston. It looked good. And, of course,
you still can't see anything yet - -
00 04 13 46 CDR All right.

00 04 13 47 CMP -- when we pitch around, I'll show it to you.

00 04 13 48 CDR PYRO ARM, two of them, SAFE.

00 04 13 49 CMP PYRO ARM, two, SAFE.

00 04 13 51 CDR LOGIC, OFF.

00 04 13 52 CMP LOGIC's OFF.

00 04 13 53 CDR cb SECS ARM, two, open.

00 04 13 56 CMP ARM's open.

00 04 13 57 CDR cb S-IVB/LM SEP, two of them, open.

00 04 14 00 CC ... Houston. We don't have our TV ground lines up at this time. If we don't get them up in time to see the pictures, we'll record it at Goldstone and show it later.

00 04 14 09 CDR Okay; Roger. LAUNCH VEHICLE/SPS INDICATOR switch to GPI.

00 04 14 14 CMP Okay, GPI.

00 04 14 16 CDR TVC SERVO POWER, two of them, OFF.

00 04 14 18 CMP OFF.

00 04 14 19 CDR EMS MODE to STANDBY.

00 04 14 21 CMP STANDBY.

00 04 14 23 CDR TAPE RECORDER, OFF.

00 04 14 24 CMP TAPE RECORDER's OFF.

00 04 14 26 CDR PCM BIT RATE, LOW.

00 04 14 28 CMP LOW, okay.

00 04 14 29 CDR Now, VERB 49.

00 04 14 32 CMP Go ahead.

00 04 14 37 CDR 96.3, 277. --

DAY 2

01 06 51 40 SC No, I hadn't heard that.

01 06 51 42 SC Well, we're out of the ... at this time.

01 06 51 44 CDR Mark.

01 06 51 45 CDR One minute.

01 06 52 01 CMP Get over here where I can watch the clock for you.

01 06 52 10 CDR DSKY's blank. Average g, EMS MODE --

01 06 52 16 CMP EMS is NORMAL.

01 06 52 18 CDR Okay. There is no ullage. You're through to proceed in 5 seconds.

01 06 52 23 CMP Standing by on the PRO.

01 06 52 35 CDR 10, 9, 8, 7, 6, 5, flashing 99 to PRO, 2, 1 -

01 06 52 44 CDR IGNITION --

01 06 52 45 CMP Thrust.

01 06 52 46 LMP Got ball valve A.

01 06 52 47 CDR Okay.

01 06 52 48 LMP Other ball valve.

01 06 52 49 CMP ... - -

01 06 52 50 CDR - - 3, 4, 5 - -

01 06 52 51 LMP Very nice.

01 06 52 52 CDR - - 6, 7, 8, 9 seconds - -

01 06 52 54 CMP/CDR SHUTDOWN.

01 06 52 55 CDR I got all ball valves off. The compressors are okay.

01 06 52 57 CMP B bank's off; A bank's off.

01 06 52 59 CDR Very good.

01 06 53 00 CMP Watch the gimbals.

01 06 53 01 CDR Gimbal's are - -

01 06 53 02 LMP I'm watching them.

01 06 53 03 CDR Okay. YAW 2 is OFF.

01 06 53 04 LMP OFF.

01 06 53 05 CDR PITCH 2, OFF.

01 06 53 06 LMP OFF.

01 06 53 07 CDR YAW 1, OFF.

01 06 53 08 LMP It's OFF.

01 06 53 09 CDR PITCH 1, OFF.

01 06 53 10 LMP It's OFF. Okay?

01 06 53 12 CDR Okay. Let me run the checklist, now.

01 06 53 14 LMP Moves out, doesn't it?

01 06 53 15 CDR Yes, DELTA-V A and B switches, OFF.

01 06 53 17 LMP They're OFF.

01 06 53 18 CDR SPS INJECTOR VALVES, all closed.

01 06 53 20 LMP They're closed.

01 06 53 21 CDR SPS HELIUM valves, talk - -

DAY 4

03 11 10 38 SC ...?

03 11 10 42 CMP We will be in a minute. There we go. Yes, it looks like it.

03 11 10 49 CDR ...

03 11 10 52 LMP We'll get it. Things are under control.

03 11 10 59 CDR Okay, this little thing is snapped in.

03 11 11 01 CMP You're on the tape recorder.

03 11 11 05 LMP ...

03 11 11 07 CDR Do, do, do, do, do, do.

03 11 11 09 CMP Okay, I'm going to close this vent now and turn it off so we won't get a MASTER ALARM.

03 11 11 12 CDR Okay.

03 11 11 13 CMP (Laughter) Yes. The dump is off; so if we get one, it'll be soon. Now, let - Is there anything you want me to check down here? Let me look around one last time. See if you see anything floating around.

03 11 11 16 LMP I don't see anything.

03 11 11 20 CMP TV camera's in good shape. It'll jump a little bit whenever we start the burn.

03 11 11 25 LMP Okay.

03 11 11 26 CMP That engine's smooth.

03 11 11 39 IMP These okay?

03 11 11 41 CMP All these hoses.

03 11 11 43 LMP Something else? ... tight enough?

03 11 11 46 CDR That's it. By-by

03 11 11 52 CMP There it goes to REACQ.

03 11 11 53 LMP Yes.

03 11 11 54 CMP You caught it because it - -

03 11 11 55 CDR Yes.

03 11 11 56 CMP - - the angles aren't too great.

03 11 11 57 LMP Yes. Now, check your tape motion.

03 11 12 00 CMP It's in motion.

03 11 12 01 CDR It's in motion.

03 11 12 04 LMP Okay, we is behind the Moon.

03 11 12 30 LMP You want your ... yet?

03 11 12 32 CDR Not for a minute. ... down.

03 11 13 03 CDR I've about worn out this piece of gum; I could go for another one.

03 11 13 08 CMP I got one I can give you, Pete. Right here, babe.

03 11 13 10 CDR Freshen her up. ... a little guy - -

03 11 13 14 LMP ... it's just that ... keep going - -

03 11 13 16 CDR You nervous?

03 11 13 19 LMP Not any more than ...

03 11 13 22 CDR That I believe.

03 11 13 29 LMP Well, I'm going to come up on the lights, here. We just won't look out any more.

03 11 13 38 CMP Put that in the TSB.

03 11 13 40 LMP I think everything's been put up. Here are these scissors; they could fall out. No sense in letting them fall out in the middle of a burn; I'll put them in my bag. Everybody's happy with their gear, huh? No pens on the overhead?

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- 03 11 13 57 CDR There's your checklist right there, troop.
- 03 11 14 00 LMP ... locked in. Okay.
- 03 11 14 03 CDR What did you do with the scissors?
- 03 11 14 05 LMP Put them in my TSB.
- 03 11 14 12 CDR You had your hat on for the burn. Probably ought to do that.
- 03 11 14 18 LMP I owe it to myself.
- 03 11 14 22 CDR Keep the sunlight out of your eyes when it pops in here.
- 03 11 14 25 LMP Not a bad idea either. Could be reflecting off that LM. I just put - -
- 03 11 14 30 CDR Good idea. GDC's ... in there; we're down to 6 minutes, huh?
- 03 11 14 36 CDR Yes. We're down to - we're a little over 10 minutes to the burn. My ... a time. Let me see, to get the burn time, I need my checklist.
- 03 11 14 53 LMP Get on that checklist 1 minute early, I think.
- 03 11 14 56 CDR Really? Is that my pen?
- 03 11 14 57 LMP Or is that your pen?
- 03 11 14 58 CDR Sure, that's my pen.
- 03 11 15 01 LMP Well, where the hell did mine go?
- 03 11 15 04 CDR ... pocket.
- 03 11 15 05 LMP Got it in my pocket - -
- 03 11 15 06 CDR ... up there for?
- 03 11 15 08 LMP Yes. Not any more than you, as they say.
- 03 11 15 10 CDR It's not, huh?
- 03 11 15 11 CMP No.

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03 11 15 12 CDR I don't like that answer. It's in my pocket. I'm just worried about you settling down and ...

03 11 15 20 LMP I'm in, babe.

03 11 15 23 CDR Ten minutes.

03 11 15 25 LMP Okay.

03 11 15 53 LMP Okay. Watch your head. Right behind - Pete, you know.

03 11 15 59 CMP Go by that and you've messed up.

03 11 16 03 CDR ... want to do, Dick, there'll be a GDC ALIGN here in a minute.

03 11 16 08 LMP It's not doing too bad when you're not moving around.

03 11 16 18 CMP Pete, you're doing okay right now.

03 11 16 31 CDR After that, you'll be on for sunvisors.

03 11 16 34 LMP I'm thinking about it.

03 11 17 00 CMP There's sunshine.

03 11 17 02 LMP Goody.

03 11 17 03 CDR Yes. On the LM.

03 11 17 06 CMP Quick one - think we've missed it. That's good.

03 11 17 12 CMP Yes. Sure is.

03 11 17 15 CDR Okay. Dick, why don't you move to ...?

03 11 17 21 CMP Move into view fast.

03 11 17 22 CDR ...

03 11 17 27 LMP I think this hat idea is a good one. Keeps us from being distracted when the Moon comes into view. Damn good idea.

03 11 17 32 CMP ... align.

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03 11 17 35 LMP Yes.

03 11 17 37 CDR He's still looking out the window. He's got 90 hours ...

03 11 17 40 LMP ... looking out.

03 11 17 45 CDR Tight is 160; loose is 115. You're going to have to watch your DELTA --

03 11 17 51 LMP Yes, I got it, ...

03 11 17 54 CDR And Dick Gordon has got to watch his P_c.

03 11 17 58 LMP They're awful tight. And we're going to stay loose at about 224. Give me a mark at 1 minute, please. We're not even there yet.

03 11 18 11 CDR No, it's not right, Al. You're loose - you're tight after about 1 - 130.

03 11 18 19 LMP 130 - okay.

03 11 18 22 CDR Okay. BUS TIES.

03 11 18 26 LMP Never mind.

03 11 18 27 CDR Okay, BUS TIES, BAT B.

03 11 18 28 CMP It's on.

03 11 18 29 CDR Got both of them?

03 11 18 30 CMP They're both on.

03 11 18 31 CDR Okay, Dick, TVC SERVO POWER - AC 1/MAIN A.

03 11 18 34 CMP AC 1/MAIN A.

03 11 18 36 CDR TVC SERVO POWER 2, AC 2/MAIN B.

03 11 18 38 CMP 2, AC 2/MAIN B.

03 11 18 39 CDR ROT CONTROL POWER NORMAL, two to AC.

03 11 18 42 CMP Two to AC.

03 11 18 43 CDR ROT CONTROL POWER DIRECT, two, OFF.
03 11 18 45 CMP OFF.
03 11 18 47 CDR BMAG MODE, three, ATT 1/RATE 2.
03 11 18 48 CMP ATT 1/RATE 2.
03 11 18 49 CDR SPACECRAFT CONTROL to SCS.
03 11 18 51 CMP SCS.
03 11 18 52 CDR RHC 2, armed.
03 11 18 54 CMP Armed.
03 11 18 58 CDR Okay. Ready for the GIMBAL MOTORS, A1?
03 11 19 00 LMP I'm ready. Go.
03 11 19 01 CMP 1.
03 11 19 02 CDR Okay, PITCH 1.
03 11 19 03 CMP Mark.
03 11 19 04 LMP On.
03 11 19 05 CMP YAW 1.
03 11 19 06 CMP Mark.
03 11 19 07 LMP On. Boy. You can feel them go on.
03 11 19 10 CDR Verify trim control and set.
03 11 19 11 CMP Trim and set.
03 11 19 14 LMP Okay.
03 11 19 15 CDR Verify MTVC.
03 11 19 21 CMP MTVC.
03 11 19 22 CDR Okay. SPACECRAFT CONTROL to CMC.
03 11 19 25 CMP CMC return to zero.

03 11 19 27 CDR Okay. TRANSLATION HAND CONTROLLER, clockwise.

03 11 19 29 CMP Clockwise.

03 11 19 30 CDR Verify no MTVC.

03 11 19 31 CMP No MTVC.

03 11 19 33 CDR GIMBAL MOTORS number 2. Ready?

03 11 19 34 LMP Ready.

03 11 19 35 CMP PITCH -

03 11 19 36 CMP Mark.

03 11 19 37 LMP On.

03 11 19 38 CMP YAW -

03 11 19 39 CMP Mark.

03 11 19 40 LMP On.

03 11 19 41 CDR Okay. Set GPI at trim.

03 11 19 43 CMP Trim.

03 11 19 49 CMP Trim's set.

03 11 19 51 CDR Boy, it really shakes the spacecraft. Verify MTVC.

03 11 19 54 CMP MTVC.

03 11 19 55 CDR TRANSLATION HAND CONTROLLER in NEUTRAL.

03 11 19 59 CMP NEUTRAL.

03 11 20 00 CDR No MTVC.

03 11 20 01 CMP No MTVC.

03 11 20 02 CDR Verify GPI returns to zero.

03 11 20 03 CMP Zero.

03 11 20 04 CDR ROT CONTROL POWER, two of them, AC/DC.
03 11 20 08 CMP AC/DC.
03 11 20 09 CDR ROT CONTROL POWER DIRECT, two, MAIN A/MAIN B.
03 11 20 11 CMP MAIN A/MAIN B.
03 11 20 12 CDR BMAG MODE, RATE 2.
03 11 20 14 CMP RATE 2.
03 11 20 16 CDR Okay. PRO.
03 11 20 19 CMP Trim. Trim.
03 11 20 25 CDR Okay. BMAG MODE, three, ATT 1/RATE 2.
03 11 20 28 CMP ATT 1/RATE 2.
03 11 20 30 CDR ENTER.
03 11 20 31 CMP ENTER.
03 11 20 32 CDR Gimbal drive test.
03 11 20 33 CMP Here we go. Up 2, down 2.
03 11 20 36 CDR Man, that rattles the spacecraft.
03 11 20 37 CMP Zero.
03 11 20 39 CDR What do you suppose it does when the last
thruster's ...?
03 11 20 42 LMP Naturally.
03 11 20 43 CDR Yes.
03 11 20 44 CMP Zero.
03 11 20 47 LMP It looks like an olive branch over there.
03 11 20 49 CMP Trim is set.
03 11 20 51 CDR Okay. The trim is set. Should be - and we're
there. TFI, V_G , and DELTA- V_M . FDAI SCALE, 5/5.

03 11 21 01 CMP 5/5.

03 11 21 03 CDR LIMIT CYCLE, OFF.

03 11 21 04 CMP LIMIT CYCLE'S OFF.

03 11 21 05 CDR RATE, HIGH.

03 11 21 06 CMP RATE, HIGH.

03 11 21 07 CDR Update the DET.

03 11 21 08 LMP Looks like it's right on.

03 11 21 11 CDR Okay, standing by for 2 minutes.

03 11 21 17 LMP This thing looks like an olive branch though; you can't see it. When it was in close, it's - -

03 11 21 21 CMP Big circular pieces here.

03 11 21 24 LMP Suit?

03 11 21 26 CMP Wonder where it came from.

03 11 21 27 LMP I don't know. It looks about like this; it looks about this big.

03 11 21 31 CDR Okay. Let's not worry about it right now.

03 11 21 52 CDR Sun looks the same on this side of the Moon as the other side. Sure weren't back there very long. Because we're going fast, I guess, no? Don't know why it was. Yes, because we're going by it; that's why, we're not orbiting it. It's a lot faster than - yes, 2800 feet per second more - What do you want?

03 11 22 16 CMP Look at the time.

03 11 22 17 CDR Okay. I've got 3 minutes, and we're going to pick up the checklist at the 2-minute mark. Okay. What are you going to start on, bank A?

03 11 22 24 CMP Yes.

03 11 22 25 CDR Okay.

03 11 22 26 CMP Okay. I'll be watching bank A.

03 11 22 29 LMP Say a little word about this - thing.

03 11 22 34 CDR Well, I - I thought that we were told that as long as it did what it was supposed to do, everything was okay; but if it went to full decrease or something like that - -

03 11 22 44 LMP Yes. That's right. That's always true.

03 11 22 47 CMP If it jumps, it's going - -

03 11 22 49 CDR It's going to jump to decrease whenever we pull crossover - -

03 11 22 52 LMP Yes.

03 11 22 53 CDR - - but we'll already be in increase.

03 11 22 54 LMP Yes.

03 11 22 55 CDR You're right. It's not going to stay at zero.

03 11 22 56 LMP All right.

03 11 22 57 CDR If it goes wild, we'll fix it; but, otherwise, it stays right there.

03 11 22 59 LMP Yes.

03 11 23 06 CDR All right, 2-minute check. DELTA-V THRUST A switch - -

03 11 23 16 CMP THRUST A.

03 11 23 17 CDR - - NORMAL.

03 11 23 18 CMP NORMAL.

03 11 23 19 CDR TRANSLATIONAL HAND CONTROLLER, armed.

03 11 23 21 CMP Armed.

03 11 23 22 CDR ROTATION HAND CONTROLLER, two of them, armed.

03 11 23 23 CMP Armed.

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03 11 23 24 CDR Now, don't hit it, Al.
03 11 23 25 LMP Okay.
03 11 23 26 CDR SPS HELIUM valves, two of them, to AUTO.
03 11 23 28 LMP They're AUTO.
03 11 23 29 CDR TAPE RECORDER, HIGH BIT RATE, RECORD, FORWARD --
03 11 23 31 CMP HIGH.
03 11 23 33 CDR RESET. FORWARD and COMMAND --
03 11 23 47 CDR One minute and 30 seconds coming up.
03 11 24 09 CDR Forget it.
03 11 24 23 CDR Okay, 1 minute.
03 11 24 24 LMP Okay.
03 11 24 25 CMP The clock's started here. DSKY's blank; everybody's ready.
03 11 24 31 LMP Okay, it's going to be ball valve A.
03 11 24 48 CDR DSKY's blank. Average g and hit the EMS to NORMAL.
03 11 24 56 CMP NORMAL.
03 11 24 58 CDR Okay.
03 11 24 59 CMP ...
03 11 25 01 CDR It's such a long burn, it isn't going to make much difference. Go ahead, get NORMAL. There you go.
03 11 25 08 CDR 15 seconds.
03 11 25 13 CDR 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 -
03 11 25 23 CDR IGNITION.
03 11 25 24 LMP THRUST ON.

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03 11 25 25 CDR You got ball valve A. Get B.

03 11 25 26 CMP There's B.

03 11 25 27 CDR You got B.

03 11 25 28 LMP ...

03 11 25 29 CDR Okay.

03 11 25 31 LMP ... pressures looking fine.

03 11 25 32 CDR All the pressures here look good.

03 11 25 34 CMP All right.

03 11 25 35 LMP ... looking good. ...

03 11 25 39 CDR Nice and smooth.

03 11 25 42 CMP ... 1.

03 11 25 43 CDR ... balance indicator's good.

03 11 25 44 LMP Twenty seconds. You're right on the money.

03 11 25 48 CDR Everything looks good over here.

03 11 25 50 CMP Power is off. Roll's good here.

03 11 25 54 LMP Oh, don't worry about roll.

03 11 25 56 CDR Everything looks good.

03 11 26 11 CDR Okay, gang, we're out of mode I ...; we're into mode I-A.

03 11 26 16 LMP Looks good. Fuel pressure ...

03 11 26 19 CDR We're still in ...

03 11 26 20 CMP Pressures look good.

03 11 26 22 CDR How's the timing ...

03 11 26 25 CMP That's okay. ... here. Everything's good.

03 11 26 39 LMP ... pressure's 98. Gimbal's are working.

03 11 26 48 CMP Everything looks good here.

03 11 26 51 CDR We're coming up on -

03 11 26 54 CDR MARK.

03 11 26 55 CDR You're mode II.

03 11 26 57 CMP Loose rules now?

03 11 26 58 LMP Loose rules.

03 11 26 59 CMP Okay.

03 11 27 00 LMP Hey, I'm not watching the clock at all ... going on DELTA-P now?

03 11 27 04 LMP Okay.

03 11 27 05 CMP Watching the loose ones now.

03 11 27 15 CMP Watching those loose ones.

03 11 27 19 LMP ... pressure is falling under 199.

03 11 27 23 CMP Way it ought to be, babe.

03 11 27 26 LMP It's riding in from here. See some little ones back there, may be fuel flash.

03 11 27 43 LMP ... fuel ...

03 11 27 45 CMP We've got plenty. 74.

03 11 27 47 CDR Okay. We're ... mode II. We're at ... release again.

03 11 27 51 CMP Okay. Looking real good.

03 11 28 00 LMP Good here.

03 11 28 01 CMP Helium's come down to about half, which is normal.

03 11 28 04 LMP Looks good.

03 11 28 07 CMP What kind of g's we pulling?

03 11 28 08 CDR Oh, enough. Twelve seconds; we're in mode III; we're still in the loose rules.

03 11 28 16 CMP Okay. That was just me moving my head just a little. Let me move it again. Sorry I didn't mention it. I didn't know it was going to make any noise.

03 11 28 28 CDR It's okay. Okay, it's 3 minutes into the burn. We're coming up on tight rules very shortly.

03 11 28 35 CMP Everything's solid; and everything looks good here. We're down to 65 percent.

03 11 28 40 CDR Okay. We're over 2. There you go. We're coming in ... Wow!

03 11 28 47 LMP Put your hat back on.

03 11 28 48 CDR Supposed to do that.

03 11 28 49 LMP I know. Got to do it.

03 11 28 52 CDR Okay, gang -

03 11 28 53 CDR MARK.

03 11 28 54 CDR Mode III. Tight rules.

03 11 28 56 LMP Okay.

03 11 28 57 CDR Now I'm going to monitor for shutdown.

03 11 29 00 LMP That balance looks good. Staying right in the center.

03 11 29 03 CMP Gimbal motors are straight.

03 11 29 12 CDR ... give us the mode ... data.

03 11 29 17 CMP Solid as a rock, boy. That thing hasn't even moved.

03 11 29 21 LMP Check the nitrogen; looks good. Not a thing.

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03 11 29 24 CDR Okay. It looks to me like we got a hot engine, and we're going to shut down early.

03 11 29 29 CMP Okay.

03 11 29 30 CDR About 5 seconds early.

03 11 29 31 CMP Okay.

03 11 29 34 CDR I'll keep watching her.

03 11 29 37 CDR Did you get crossover yet, Al?

03 11 29 38 LMP No. No. -

03 11 29 39 CDR 55; we're just about finished.

03 11 29 41 CMP ... that chamber pressure; everybody is going to ...

03 11 29 53 CDR ...

03 11 29 56 CDR Boy, this engine is really running hot; looks like it's going to shut down quite early.

03 11 30 08 CMP 100-percent chamber pressure.

03 11 30 10 LMP Yes. I couldn't tell crossover here.

03 11 30 16 CMP ... going to shut down at 5:52.

03 11 30 18 CDR It's going to shut down 6 seconds early.

03 11 30 29 LMP Yes. It's perfect.

03 11 30 31 CMP 100-percent chamber pressure.

03 11 30 33 LMP It's up high in the increase range, and it's still there.

03 11 30 45 CDR Six seconds until shutdown; it's going to shut down at 52. Going to shut down 6 seconds early.

03 11 30 56 CMP Twenty seconds.

03 11 31 05 CMP Ten - 5:52.

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03 11 31 08 CDR Yes. 5, 4, 3, 2, 1 -
03 11 31 15 CDR SHUTDOWN.
03 11 31 16 CMP SHUTDOWN.
03 11 31 17 LMP SHUTDOWN.
03 11 31 18 CDR All balls valves are off.
03 11 31 19 CMP Okay.
03 11 31 20 CMP GIMBAL MOTORS.
03 11 31 21 LMP I'm standing by.
03 11 31 22 CMP 2 YAW.
03 11 31 24 LMP 2 is off, I think.
03 11 31 25 CMP PITCH 2.
03 11 31 27 LMP Off.
03 11 31 28 CMP YAW 1.
03 11 31 29 LMP It's off.
03 11 31 30 CMP PITCH 1.
03 11 31 31 LMP It's off.
03 11 31 32 CMP Okay.
03 11 31 33 LMP Over ...
03 11 31 34 CDR All right. Let's check all those SPS INJECTOR
valves and close the HELIUM valves --
03 11 31 39 LMP Wait a minute. Let me get the residuals.
03 11 31 41 CDR Ooh! God damn it; ... plus 1, plus 1.
03 11 31 47 CDR Okay, minus 1.
03 11 31 49 CMP Plus 1, plus 1.

03 11 31 50 CDR Minus 1, plus 1, plus 1. Okay.

03 11 31 56 LMP Look at that Moon.

03 11 31 58 CDR Son of a gun. Look at that place.

03 11 32 08 LMP Gosh! Look at the size of some of those craters.

03 11 32 13 LMP VERB 66, Pete.

03 11 32 15 CDR Okay.

03 11 32 16 LMP The ... is cleaned up, and the DELTA-V_M is - -

03 11 32 18 CDR Now, let me just make sure here.

03 11 32 19 LMP Did you get this, Pete?

03 11 32 21 CDR 1.1.

03 11 32 23 CMP 1.0.

03 11 32 26 CDR ... 1.0.

03 11 32 28 LMP Yes. Plus ... right. ...

03 11 32 31 CDR SPS INJECTOR valves, GIMBAL MOTORS, TVC - -

03 11 32 33 CMP They're okay.

03 11 32 34 CDR - - SERVO POWER, MAIN BUS TIES - -

03 11 32 35 CMP Check out the BUS TIES.

03 11 32 37 LMP Okay.

03 11 32 38 CDR Null residuals; we're getting EMS FUNCTION, OFF: EMS MODE to STANDBY.

03 11 32 40 LMP Okay.

03 11 32 41 CDR LIMIT CYCLE, ON?

03 11 32 42 LMP LIMIT CYCLE's ON.

03 11 32 43 CMP Okay.

03 11 32 44 CDR ATT DEADBAND, MAX.

03 11 32 45 LMP MAX.

03 11 32 46 CDR TRANS CONTROL POWER, OFF.

03 11 32 47 LMP OFF.

03 11 32 48 CDR ROT CONTROL POWER, two, OFF.

03 11 32 49 LMP Two, OFF.

03 11 32 50 CDR BMAG MODES, three of them, to RATE 2.

03 11 32 52 LMP ROT CONTROL POWER DIRECT - -

03 11 32 54 CDR ROT CONTROL - -

03 11 32 56 CDR PCM BIT RATE, LOW.

03 11 32 57 LMP It's low.

03 11 32 59 CDR Do a VERB 82, if you want to.

03 11 33 02 LMP Got it - Man! Look, at that place. Outstanding effort there, Dick Gordon. Flash Gordon pilots again!

03 11 33 12 CDR 170 by 61.8.

03 11 33 14 LMP That is absolutely ...

03 11 33 18 CMP Got it?

03 11 33 19 LMP Yes. We're circling around ... place - -

03 11 33 21 CDR Let me see your fuel and oxidizer.

03 11 33 24 LMP Okay, the fuel is 34. - correction, 38.4; oxidizer is - -

03 11 33 29 CDR Fuel - Wait a minute. Oh, here it is. I see; 38.4 - -

03 11 33 33 LMP - - and 38.7, and unbalance is about 80 pounds increase.

03 11 33 44 CDR Okay.

03 11 33 48 LMP Look at that Moon bugger! I'll tell you, I may be colorblind, but that looks gray as hell to me.

03 11 33 58 CDR What are you doing? Oh, you're rolling.

03 11 33 59 CMP I'm rolling, for attitude, Pete, for attitude. I'm working.

03 11 34 02 CDR Save that gas, babe! Save it!

03 11 34 04 CMP I'm saving it.

03 11 34 05 CDR Good Godfrey! That's a God-forsaken place; but it's beautiful, isn't it?

03 11 34 10 CMP That old turtleback dome hanging there - look at it.

03 11 34 13 CDR Look - look how black the sky is -

03 11 34 15 LMP That's gray and something else.

03 11 34 17 CDR Chalky white - Those craters have been there for --

03 11 34 20 LMP A few days.

03 11 34 21 CDR Yes.

03 11 34 26 CMP Man, this is good to be here is all I can say.

03 11 34 29 CDR Has quite a horizon to it, doesn't it?

03 11 34 31 LMP Yes.

03 11 34 32 CDR It is smaller - and it's got a nice arch to it.

03 11 34 39 LMP Okay.

03 11 34 41 CDR Okay, now - Dick, you're going to roll 180 --

03 11 34 47 CMP Pitch 302.

03 11 34 48 CDR -- pitch 302 --

03 11 34 49 CMP Yaw zero.

03 11 34 50 CDR -- yaw zero.

03 11 34 51 CMP You've got the high gain angles right there. ...; there you go!

03 11 34 52 CDR Yes, we're minus 68 and sitting here at 39 REACQ.

03 11 35 00 CMP Yes, if you want. There you go. That ought to do it. Okay.

03 11 35 06 CDR That's it.

03 11 35 08 CMP Lunar surface attitude: hatch window, heads down; go ORB RATE by 8¹/₂ hours. Give me that update for time, that first lunar REV - -

03 11 35 16 CDR It's right there.

03 11 35 19 CMP Oh.

03 11 35 20 LMP ORB RATE?

03 11 35 21 CMP What was the first orbit update PAD?

03 11 35 26 CDR The map update?

03 11 35 27 CMP Yes.

03 11 35 32 CDR 83:24:35 over the 180-degree burn angle.

03 11 35 37 CMP How about 83:25?

03 11 35 39 CDR Sounds good. Okay. We'll get AOS here at 83:43:57.

03 11 35 44 LMP Do you want the TV camera out?

03 11 35 48 CDR No. We don't need it yet.

03 11 35 50 LMP We ought to be getting it out - -

03 11 35 51 CDR Well, get it out, then - find a spot.

03 11 35 55 CMP Where are we; does anybody know?

03 11 35 56 CDR Yes, 83, we're 10 minutes out; I'll show you right where we are.

03 11 36 00 LMP 10 minutes ... time.

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03 11 36 02 CDR We're right over at this spot, right here. I don't know; we're upside down, so I guess that would be out - -

03 11 36 09 LMP No, we're right-side-up now.

03 11 36 11 CMP Yes.

03 11 36 12 LMP I saw that turtleback crater; it's right in here.

03 11 36 14 CDR At 10 minutes; that's - we went by here at 25.

03 11 36 20 CMP Go get the TV camera.

03 11 36 23 CDR When I think you need it, I'll set it right here.

03 11 36 50 CMP "A" stopped the roll, huh?

03 11 37 07 LMP Says you're going to be doing this - coming around in here.

03 11 37 11 CDR Oh, gosh, what a sight!

03 11 37 13 CMP What'd you see?

03 11 37 14 CDR (Laughter) It's right-side-up in my window now; it looks fantastic. Of course, we're getting higher Sun angles - Look at that!

03 11 37 22 CMP Yes. This ... sure enough it's leaking.

03 11 37 29 LMP Everything's staying just like it was when we shut down, which is a swell idea, I think.

03 11 37 36 CDR Boy, you'd never guess; it doesn't look like we're 60 miles, does it?

03 11 37 41 LMP That's because everything is so much bigger; the craters are so much bigger - than anything you've ever seen, and I think that's why.

03 11 37 47 CDR Guess you're right.

03 11 37 49 LMP I was looking at them, you know, as we came in, and they're just huge.

03 11 38 02 CMP I marked this so we'd know where we were. Who's got a dry cloth? Hand me your --

03 11 38 11 CDR We're 5 minutes to AOS.

03 11 38 12 CMP -- hand me your cloth, please, Pete.

03 11 38 18 LMP Thruster's going.

03 11 38 21 CDR Man, that's got to be spectacular!

03 11 38 25 LMP Okay. Looks good, Dick.

03 11 38 34 CDR Boy, that's good right there. There you go.

03 11 38 49 LMP There you go.

03 11 38 50 CMP Here's your thing back, Pete. Got it all done.

03 11 38 55 LMP Yes. You've got me all discobooberated, perspective-wise, now that we're in orbit. You feel the same way?

03 11 39 03 CMP Hey, who's that big guy?

03 11 39 08 CDR We're going to have to learn which way on that map, whether we're going backwards or forwards - what we're doing. For example, we're right now at 25 --

03 11 39 18 CMP We're right in at 25?

03 11 39 20 CDR ... PH, 39; so it's 14 minutes. Fourteen minutes - Here's 20; we're right around in here. Now - We're looking backwards. We ought to turn this map around the way we're going, see.

03 11 39 34 LMP Hey, I see - I see the crater ...

03 11 39 36 CDR Here's the thing; you put our map around the way we're going - see, and out your side you ought to see a huge old one.

03 11 39 43 LMP Where?

03 11 39 44 CDR Right out there.

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- 03 11 39 45 LMP I do - a monster - -
- 03 11 39 47 CMP Right here, there's about three or four right in the middle of - -
- 03 11 39 49 LMP There's one that's got a whole bunch of craters in the bottom of it, where's ...?
- 03 11 39 52 CMP That's this one - great big thing.
- 03 11 39 55 LMP No, it's not the same one.
- 03 11 39 58 CDR I'll tell you what; you could use this other map - It's a 1:1. It may be a better one. Take a look at this one, Dick. Try this one for size. Look at about - 15 minutes. The secret is to point the map down towards the LEB.
- 03 11 40 27 LMP Is it firing?
- 03 11 40 29 CMP Yes.
- 03 11 40 30 LMP Why?
- 03 11 40 31 CMP ... set to hold.
- 03 11 40 36 LMP Man, it was firing. Everybody complains, though.
- 03 11 40 43 LMP ... the firing - -
- 03 11 40 44 CMP There's a huge monster with a central peak. Look at that!
- 03 11 40 48 LMP/CDR Where?
- 03 11 40 49 CMP Out my window; take a look.
- 03 11 40 51 CDR Oh, yes. Right out there; that's - that's - that's the one - -
- 03 11 40 55 LMP That's the one you said was called Tsí - Tsí - Oh, yes. Tsiolkovsky - Tsiolkovsky?
- 03 11 41 03 CMP Is that the way we're going?
- 03 11 41 04 LMP Tsiolkovsky - yes. See, put this like this, where this points at the LEB and then - -

03 11 41 08 CMP Is it a double crater, Al?

03 11 41 10 LMP Well, hold it like this; this is the way we're going; that's your side - -

03 11 41 13 CMP Yes, but this - That's not a double crater. This is a double crater; this is the big crater - -

03 11 41 18 LMP That one right there with the central peak in it, is that the one you're talking about?

03 11 41 20 CMP No. Way out here! Look at this - -

03 11 41 22 LMP Oh - oh (laughter). Goodness, you're right! Wow!

03 11 41 26 CMP It's got a mare with it.

03 11 41 27 LMP There it is. Yes. Look at that.

03 11 41 29 CMP Just go ahead and slide across.

03 11 41 34 CDR Which one are you looking at, Al?

03 11 41 35 LMP Right there.

03 11 41 36 CDR Oh, yes. Isn't that pretty?

03 11 41 40 LMP ... hold this TV or something; I shouldn't have got it out, because I can take pictures.

03 11 41 43 CMP I'll be waiting.

03 11 41 44 CDR We'll be back here again - -

03 11 41 46 CMP What's the big hurry, Bean-o?

03 11 41 47 LMP Take pictures.

03 11 41 48 CDR Take pictures next REV.

03 11 41 49 LMP Oh, yes. We're almost gone.

03 11 41 52 CMP Let's see. What's the trouble with - -

03 11 41 54 LMP I just had your strap, Dick.

CONT'D

03 11 41 56 CMP Oh, you had. Just a minute, and I'll get mine out of the way. Clean up the - -

03 11 42 00 LMP Here's your strap.

03 11 42 03 CDR We're going to have acquisition here in about another 2 minutes.

03 11 42 05 LMP We do; will check it on our high gain.

03 11 42 08 CDR Boy, that does have mare in it, doesn't it?

03 11 42 11 CMP Yes.

03 11 42 12 CDR What did we end up percent on fuel?

03 11 42 14 LMP Good God; 38.4 for fuel and 38.7 for oxidizer.

03 11 42 19 CMP I hope we burned enough. Did the EMS say we did?

03 11 42 23 LMP No - Shut down early.

03 11 42 24 CDR Huh? Oh, yes. ... degrees.

03 11 42 26 CMP Oh, okay. I couldn't tell.

03 11 42 28 LMP EMS has 1.0.

03 11 42 30 CMP All right.

03 11 42 33 LMP Unbelievable! Just think, just the little bit-tiest ones down there we can see are going to be our crater. Hey, there's one with collapsed sides over there. See it?

03 11 42 44 CDR Where?

03 11 42 45 LMP Out your side - straight ahead, sort of.

03 11 42 47 CDR Oh, yes. All clumped -

03 11 42 49 LMP I wonder if we ought to have sunglasses for this - It's white down in here, you notice?

03 11 42 56 CDR Where I'm looking is a - a higher - higher Sun angle. Yes, we are climbing.

03 11 43 01 CMP You can tell?

03 11 43 02 CDR Boy, look at that black horizon; that's black.

03 11 43 05 CMP It's the white and black - it's -

03 11 43 08 CDR I don't think - I don't want sunglasses.

03 11 43 15 LMP It does something, all right. It doesn't seem to have - Well, let's don't use them for a while. We may get - eyes may hurt later.

03 11 43 22 CMP Look at those craters. Man, there's been a lot of action down there.

03 11 43 32 SC Pretty out.

03 11 43 44 CMP Eighteen minutes.

03 11 43 46 LMP ...

03 11 43 47 CMP 25 - NOUN 43 - -

03 11 43 50 LMP It's 18 minutes.

03 11 43 54 CMP Go ORB RATE at what time - 84, right?

03 11 43 58 CDR By 84 - -

03 11 43 59 LMP Right here.

03 11 44 00 CDR - - We got to get Hous - There he comes; he's just coming in.

03 11 44 04 LMP Huh? There you go - How'd you know, ...?

03 11 44 09 CMP Al Bean, you keep forgetting about that gain.

03 11 44 11 CDR He thought it was zero when we looked at it. Wait until I tell them the good news, y'all - They don't know that's the reason they got us, but -

03 11 44 20 CDR Hello, Houston. Yankee Clipper with Intrepid in tow has arrived on time. Are you ready for the burn status report?

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03 11 44 31 CC That's affirmative. Go ahead, Clipper.

03 11 44 33 CDR Okay. The burn was on time. The burn time was 5 plus 52; the residuals - -

TIME SKIP

03 13 07 39 CDR That and, man, if they were hot, wouldn't that be something?

03 13 07 43 LMP ... control ... freezing your ass off.

03 13 08 45 LMP Want some?

03 13 08 47 CDR Yes.

03 13 08 49 LMP Is it a super-do like the good one?

03 13 08 53 CDR Say - you're the only guy that knows.

03 13 09 07 CMP What?

03 13 09 43 CDR Hey, there's a good one. (Singing)

03 13 09 50 LMP ...?

03 13 09 52 CDR Back in there somewhere. Get out a couple for me, would you?

03 13 10 00 CDR (Singing) Hey, Dixie, steady as you rove - through the Gulf of Mexico -

03 13 10 24 LMP Oh, boy! Look at that.

03 13 10 37 CMP Somebody got in the shitlocker, I guess.

03 13 10 40 LMP Huh?

03 13 10 41 CMP Somebody got into the shitlocker.

03 13 10 42 CDR (Laughter)

03 13 10 44 LMP Why? Did some come out?

03 13 10 46 CMP Here - in my spoon.

03 13 10 48 CDR (Laughter)

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03 13 10 49 LMP It's not floating; must be Pete's.

03 13 10 53 CDR (Singing) Steady as she goes -

03 13 10 54 LMP (Singing) On her way down - to the Gulf of Mexico.

03 13 10 55 CMP ... that tape, you know.

03 13 10 59 LMP So what?

03 13 11 01 CDR (Laughter)

03 13 11 03 LMP So what! Life in the spacecraft.

03 13 11 08 CDR I knew his attitude would change once they got him here.

03 13 11 11 LMP (Laughter)

03 13 11 14 CDR We can always start talking about ...

03 13 11 22 CMP Sorry, I'm not too familiar with those.

03 13 11 23 CDR (Laughter)

03 13 11 38 CMP Sing Al's song.

03 13 11 42 CDR (Singing) Hey, Dixie, steady as you rove - ...

03 13 11 54 CDR Thank you, Richard; this looks delicious.

03 13 12 08 LMP ... all red.

03 13 12 09 CMP These puddings are ... with milk.

03 13 12 16 CDR I've eaten worse food in the last 3 days than I've eaten in my ...

03 13 12 49 CDR Got to start watching this baby here - see what happens.

03 13 13 12 CDR That waste water dump is ..., too.

03 13 13 32 CDR Hey, we're supposed to do this fuel cell purge and waste water dump at 85:30.

[REDACTED]

03 13 13 39 LMP Wonder what they want us to dump it to; they never did say.

03 13 13 42 CMP Dump it to the nominal 25.

03 13 13 48 LMP Just to normal?

03 13 13 50 CDR Why don't we dump it to 10, just to be safe?

03 13 13 57 CMP There it is. Won't hurt a thing.

03 13 14 19 CDR (Laughter)

03 13 14 41 CDR Hey, Dick, where are you going to sleep at night when you're by yourself?

03 13 14 45 CMP I'm going to sleep underneath the couches like you.

03 13 15 11 CMP Oh, it's only one night, Pete, ... worried about it.

03 13 15 13 CDR ...

03 13 15 20 CMP That's right; I keep thinking that - -

03 13 15 23 CDR Say, it isn't only one night.

03 13 15 24 CMP - - Yes, I keep thinking it's tonight.

03 13 15 29 LMP Tomorrow we do the landing ... EVA ...; that's kind of a - - -

03 13 16 08 CDR Hey, this tastes good.

03 13 16 10 LMP What's that?

03 13 16 14 CDR Apricot. You want one?

03 13 16 18 CMP No, thank you.

03 13 16 20 CDR A1?

03 13 16 21 LMP No, thank you, Pete; I'll ...

03 13 16 36 CMP So long as you like it, Pete, it's a good deal.

03 13 16 40 LMP What's your new logic?

[REDACTED]

03 13 16 43 CMP ... I like to eat on Earth. ...

03 13 16 51 CDR ... ate what they gave me or what I could stuff down. There's a couple of times I stuffed down a whole lot more than I ever ate on Earth. This ... feels good.

03 13 17 06 LMP Feels great to me. And I didn't eat all my chow yesterday.

03 13 18 17 LMP Well, I hope we gave what they wanted on that - TV show.

03 13 18 25 CDR ... thing they haven't had before.

03 13 18 27 CMP That right?

03 13 18 30 CDR We didn't give them anything they hadn't seen before.

03 13 18 36 CMP Unfortunately, a lot of the public didn't watch it all on the ...

03 13 18 41 CDR Kind of like ..., I guess.

03 13 19 14 LMP Anybody want a grape --

03 13 19 15 CMP Did anybody tape those up yet?

03 13 19 23 CDR Watch your fingers. ...

03 13 19 30 CMP All right. Clean out this TSB one more time, too --

03 13 19 35 CDR ... nicely --

03 13 19 36 CMP -- before you guys go --

03 13 19 37 CDR -- leave you a clean spacecraft.

03 13 19 38 CMP -- so I can - keep it up ...

03 13 19 39 LMP Yes.

03 13 20 02 CDR There goes the O₂ FLOW HIGH - I'd say the water's ...

03 13 20 13 CDR That's exactly what it was.

03 13 21 36 CMP Are you going to help me ...?

03 13 21 38 LMP Yes.

03 13 21 39 CDR Huh?

03 13 21 41 LMP That's right.

03 13 21 42 CDR We're going to go through that data and make sure we got every single one GO.

03 13 22 00 CMP Here's number 2.

03 13 23 39 CDR Twenty-four hours from now, you'll know we're on our way down, Al. That's when I get nervous. Find that little mother - and I'll land it right-side up.

03 13 23 59 CMP You got to stop it if you're going to land it right-side-up ...

03 13 24 02 CDR All right.

03 13 24 33 CDR What you looking for, Dicky-Dick?

03 13 24 41 LMP Yes. That lunar landmark; you knew you had to get that out sooner or later.

03 13 24 47 CMP ...

03 13 24 55 LMP That food package is exactly the same size, if not just a little bit bigger, than the one I set out.

03 13 25 03 CMP That means you didn't eat much.

03 13 25 04 LMP What are you trying to tell me?

03 13 25 06 CMP I'm trying to tell you you didn't eat.

03 13 25 09 LMP No, it's just that they don't - they don't fold up any smaller than they come.

03 13 25 15 CDR H-1; where are you, H-1 - there it is, H-1.

03 13 25 28 CDR Boy, the Sun moves pretty fast, doesn't it?
Moltke was in the damn - Was Moltke in the terminator?

03 13 25 34 CMP Right at the terminator. Right at it.

03 13 25 49 CDR We're trying to track what? This little fellow right there - is it this one right here?

03 13 25 58 CMP Good luck. Hope you see the ...

03 13 26 01 CDR (Laughter)

03 13 26 17 CDR Gad, there's stars out there; can't believe it.

03 13 26 20 LMP Not much difference ... simulator.

03 13 27 00 CDR Which stars should we be looking at?

03 13 27 04 CMP We're at 245 pitch, and we ought to be looking at - I get Enif.

03 13 27 15 CMP Right in here?

03 13 27 23 LMP Hey, I can see the Pleiades!

03 13 27 25 CMP There you go.

03 13 27 29 LMP Eureka! Hey, that's pretty damn good for this little fellow!

03 13 27 33 CMP Which fellow?

03 13 27 34 LMP The goddamned tele - telescope, right?

03 13 27 38 MS ... the sun's shining in there ...

03 13 27 53 LMP What else is out there? There's all kinds of stars, but I don't recognize any.

03 13 28 03 LMP Hey, you know one of the ..., Dick?

03 13 28 06 CMP Huh?

03 13 28 07 LMP How could this goddamn -

03 13 28 09 CMP Yes.

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03 13 28 14 CDR Hey, there's all kinds of stars out there now.

03 13 28 20 LMP I ought to recognize something, but I don't. What's around the Pleiades? Name some things.

03 13 28 28 CMP Aldebaran.

03 13 28 30 LMP What's he in?

03 13 28 31 CDR ...

03 13 28 32 CMP He's in ... Menkar. ...

03 13 28 38 CDR Whoops! Whoops! That did it.

03 13 28 40 CMP Came up.

03 13 28 41 CDR That did it; the Sun came up. Zap! ... the quads and everything else ...

03 13 28 49 LMP There they are; that blew it, right there. I need a schedule; what time is it? That's the real time.

03 13 28 56 CMP ... 30 - we're here.

03 13 28 58 LMP Okay. Is our inlet temperature of the radiator - and the outlet, ... flight plan?

03 13 29 05 CDR Let me have - Al, you want to start on the H₂/O₂ purge? And if you'll give me the tool --

03 13 29 14 LMP I'll get it.

03 13 29 15 CDR -- tool E, I'll go start the water dump.

03 13 29 17 CMP All right. Turn it off; I'm watching the waste right now.

03 13 29 22 LMP Turn off. Potable --

03 13 29 25 CMP Now, I'll dump the potable - potable, too.

03 13 29 31 CDR DUMP A potable, closed.

03 13 29 35 CMP Hold on.

03 13 29 36 CDR Whoo, man! Is it dumping! Whee!

03 13 29 39 CMP Purge the fuel cells.

03 13 29 42 LMP There's bound to be some somewhere - in the flight plan - ...

03 13 29 47 CDR Look at that thing spray out of the side of the spacecraft; I never saw - look at that! That is propulsive, too.

03 13 29 55 CMP You better believe it.

03 13 29 58 CDR Sure it is.

03 13 29 59 LMP Gum, anyone?

03 13 30 00 CDR Yes, please.

03 13 30 02 CMP I'm sure this book's from somewhere - probably up there.

03 13 30 05 LMP How come you don't ...?

03 13 30 12 CDR You ought to ... some faster than that, you sleeping?

03 13 30 20 LMP ...

03 13 30 22 CMP Your O₂ purge?

03 13 30 24 LMP Huh? What O₂ purge?

03 13 30 31 CMP Why did the flow go high?

03 13 30 32 CDR ...?

03 13 30 33 LMP I ain't through.

03 13 30 34 CMP Huh?

03 13 30 35 CDR It's not down there.

03 13 30 37 LMP That's closed.

03 13 30 41 CDR Had a water ...

03 13 30 42 LMP Yes.

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- 03 13 30 43 CDR Well, why would that make it go high?
- 03 13 30 46 CMP ... switches momentarily.
- 03 13 30 48 LMP Cabin pressure's okay.
- 03 13 30 50 CMP Can't give any reason for that. . . . are pretty shook up, too.
- 03 13 30 55 CDR Well, why is it high right now? I know; water dump. I bet you.
- 03 13 31 04 LMP You got to push it to oxygen to pressurize . . .
- 03 13 31 12 CMP No, afterwards. Prepare the ship for us.
- 03 13 31 15 CDR No, they say your . . . - -
- 03 13 31 17 CMP . . . told me . . .
- 03 13 31 19 CDR You got to keep the . . . in condition.
- 03 13 31 22 CMP . . . for your return trip home, you see.
- 03 13 31 26 LMP What good would it do if I had a stopped-up nose? None.
- 03 13 31 30 CMP Where the hell is my - -
- 03 13 31 31 CDR Boy, that thing is propulsive.
- 03 13 31 34 CMP Which way's it going - it's going out - -
- 03 13 31 36 CDR Right out that way; right out that way.
- 03 13 31 38 CMP . . .
- 03 13 31 41 CDR It's radial - it's radial for that; it's perpendicular to the X-axis, but it's going out about 45 degrees here.
- 03 13 31 51 LMP Here, Dick.
- 03 13 31 53 CMP . . .
- 03 13 32 03 CDR . . . can see it better from this window, Dick. Take a peak out of that there.

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03 13 32 58 LMP ...

03 13 33 51 LMP What's waste water?

03 13 34 25 CDR H₂ coming on.

03 13 34 27 LMP Okay.

03 13 34 42 CDR ... through the supply valve.

03 13 34 45 LMP Okay, yes.

03 13 34 47 CDR Knew there was something I hadn't done.

03 13 35 19 CDR ... when you get this shit in here.

03 13 35 24 LMP It's hard to work in a ... with all that other stuff.

03 13 36 20 LMP Have we picked up the Moon, yet?

03 13 36 23 CMP No.

03 13 36 24 CDR I thought it was the Moon ... possible ... radar.
Okay, H₂ off.

03 13 36 33 CMP Fuel cell 1 has been purged - are you going to go for 2?

03 13 36 37 LMP Yes, I think I'll go to 2 ...

03 13 37 59 CDR That's the first time I could notice chlorine in the water.

03 13 38 02 LMP I never did.

03 13 38 03 CMP I haven't either.

03 13 38 04 CDR Boy, I can right now - I can right now.

03 13 38 07 LMP Wonder why.

03 13 38 10 CMP ... little ... purge -

03 13 38 15 CDR Probably getting ahead of the chlorination.

03 13 38 17 LMP Yes.

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03 13 38 18 CDR Like building up a chlorine content.

03 13 38 26 CDR Might - You get that one side -

03 13 38 32 LMP You know it's over ...

03 13 39 16 CDR (Singing)

03 13 39 26 CDR ...?

03 13 39 27 LMP No. It's not ... now. He opened that last little vent like a bunny.

03 13 39 33 CMP Sure does.

03 13 39 34 LMP Potable open? Potable's open?

03 13 39 43 CDR ..., that's never going to stay there, Dick.

03 13 39 45 CMP Okay. Another ...

03 13 40 45 CMP ...?

03 13 40 48 CDR Gosh, isn't that nice? Oh, God damn, there it is - the Moon!

03 13 41 15 CMP Funny.

03 13 41 18 LMP Wait until you see it out of our window.

03 13 41 22 CDR What'd you do? Right there.

MUSIC (Freight Train)

03 13 41 50 LMP Okay. Goldstone 2 ...

03 13 41 52 CDR Number 3.

03 13 41 54 LMP H₂ MASTER ALARM.

03 13 42 09 CDR You really think that Moon's all the same color, huh?

03 13 42 12 LMP I don't know, but it looks it to me.

03 13 42 19 CMP No, there's some ... white - Look at some - look at some of the slopes; see if they don't look a ... gray as the others do.

03 13 42 24 CDR It looks a whole lot whiter over here. Even in the shadow; look at that shadow down there. Would you look in the shadows! They're something!

03 13 42 47 CMP There's some mighty healthy craters down there.

03 13 42 49 LMP Wow, you ...

03 13 42 53 CMP Very big - very big ones.

03 13 43 04 LMP Christ, we're low over here again.

03 13 43 08 CDR Matter of fact, there we are, right? We're - No, we're not at our low point; we're exactly 180 degrees from the - from the - the landing site.

03 13 43 34 CDR Look at those mountains, Dick. God damn!

03 13 43 39 CMP Yes.

03 13 43 44 LMP 58 - I wonder if that ... degrees is right in my LOI ...

03 13 44 01 CDR Wow, look at those mountains!

03 13 44 05 CMP Look at that row of craters right there.

03 13 44 09 CDR Yes, but that's not craters. You know what that is?

03 13 44 12 CMP Those are vent tubes.

03 13 44 13 CDR Yes.

03 13 44 14 LMP Vent holes.

03 13 44 15 CDR Yes.

03 13 44 20 CDR Hey, we ought to get a picture of that; I haven't seen anything like that before.

03 13 44 24 CMP Give me the camera - the camera.

03 13 44 28 CDR Hey, what's the right setting here?

03 13 44 29 CMP What was our time?

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- 03 13 44 31 LMP What time were we supposed to do that? Tell me what time it was, and I'll write it down up here.
- 03 13 44 36 CMP Hurry up, Pete, or I'll miss it.
- 03 13 44 38 CDR Okay. 180 degrees - 180-degree point at 85:31; 13 ... - -
- 03 13 44 47 CMP Give me the setting, Al.
- 03 13 44 52 LMP f:4.
- 03 13 44 54 CMP At what, 1/250th?
- 03 13 44 55 LMP Always, yes.
- 03 13 44 58 CDR Can you get that string of vent tubes - get all of that stuff if you can.
- 03 13 45 02 CMP Whatever happened to that - here it is.
- 03 13 45 19 CMP Pete, if you'll write the time down over here for each REV, then we'll have it out and we won't have to look back. Tell him to ... it here.
- 03 13 45 31 CDR 85:31:16. AOS is 52 - 7 minutes. You still watching the fuel cell purge?
- 03 13 45 50 LMP Yes. They're getting a little thicker here.
- 03 13 45 57 CDR We've got to get TEI 5 block data, map update, and then that right there, Dick, does it. P52. Man, that's not bad! I never saw pictures like that from the Moon.
- 03 13 46 20 LMP They're all purged and they all look good. They're all balanced - -
- 03 13 46 26 CMP Can you come up a little, Al?
- 03 13 46 30 LMP Can it pick them up any?
- 03 13 46 32 CDR I swear it's a different color over here, Dick. I don't think the fact that you're looking at it this way - makes any difference.
- 03 13 46 41 CMP It looks lighter to me.

03 13 46 43 CDR Sure as hell does.

03 13 46 57 CDR There's a lot of slumping in that crater.

03 13 47 05 CDR Well, I had just decided ... when we were looking straight down, we were going so goddamned slow, I just figured we were going to fall into the Moon.

03 13 47 21 CDR Old, you know that has got to be old, old, old, old!

03 13 47 28 CMP It looks just like it was when it was made, too.

03 13 47 38 CDR (Singing)

03 13 47 48 CDR I ... physically, you'd really want to land on the back side. Look at either that - either a crater or mountain sticking up; I don't know whether it's a crater or rim or what, right on the horizon.

03 13 48 00 CMP Probably a crater rim, I would guess.

03 13 48 04 CDR What do you see down there, Al?

03 13 48 09 LMP You look through this one - it looks like the optics are going like this.

MUSIC (Those Were the Days)

03 13 49 31 CDR Damn, it's bright down there. Give me a camera, Al, and tell me the settings.

03 13 49 44 LMP Okay.

03 13 49 48 CDR Is it on the right settings?

03 13 49 49 LMP I can't tell - there you go.

03 13 50 30 CDR It's 250 millimeters. Same settings?

03 13 50 37 LMP You can go to f:8 if you want; it was right on the borderline a while ago.

03 13 51 41 CDR Gee, but this is spectacular back here. I was photographing that new crater that's got a mountain in the middle of it. See it?

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03 13 51 45 LMP Yes, I see. I don't know which one it is.
03 13 51 59 CDR How's the tracking coming, Dick?
03 13 52 00 CMP Good.
03 13 52 02 CDR Good.
03 13 52 03 CMP Easy.
03 13 52 04 CDR Is it really?
03 13 52 05 CMP Yes.
03 13 52 06 CDR Is it easy to find the one you want?
03 13 52 08 CMP That's the trick. That's the trick.
03 13 52 26 CDR Damn windows really make me mad.
03 13 52 29 CMP Isn't it the truth? Sickening.
03 13 52 41 CMP It's really sickening.
03 13 52 51 CDR Got AOS.
03 13 52 55 CDR Hello, Hou - -

TIME SKIP

03 15 14 37 CDR Actually, we're - It's kind of interesting. Dick and Al and I have really switched over to this time schedule, and we're quite happy on it. We - we're not really aware of the fact that it's the middle of the night back there.
03 15 15 31 CDR Man, is that good cold water, now. Whooo!
03 15 15 35 LMP That's the good kind.
03 15 15 37 CMP How did it get cold?
03 15 15 38 CDR I just drank long enough to start getting it out of that tank. You know, emptied the line. It's cold now; isn't that cold?
03 15 16 15 LMP ... P40.

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03 15 16 20 CDR And we have not maneuvered, is that right?

03 15 16 23 CMP We have.

03 15 16 27 CDR We have?

03 15 16 28 LMP Wait a minute.

03 15 16 29 CMP ...

03 15 16 31 CDR How's the gas economy doing, Dick?

03 15 16 35 CMP I don't know. Not too well, I'm afraid. I let this thing get away a couple of times from me.

03 15 16 48 LMP Okay, we've got ullage on here. We haven't had ullage before. How many seconds?

03 15 16 54 CMP Nineteen seconds.

03 15 16 57 CDR That's what's going to cost the gas, pal. Did you pick B and D to do the ullage on? Just two-jet, huh?

03 15 17 13 CMP Yes.

03 15 17 24 CDR We lost them - right on schedule. We get them back again at 88:01.

03 15 17 37 CMP Are those the high gains we use?

03 15 17 39 CDR High gain - We should be at minus 71 and 206.

03 15 18 01 LMP 88:01 - Look at that! God, we're so much on the nominal flight plan, I can't believe it!

03 15 18 06 CMP Keep it up.

03 15 18 07 LMP 88:01, it has MSFN ACQ, and that's spectacular! Would you believe that?

03 15 18 13 CMP The burn was 4 seconds off. LOI 1.

03 15 18 17 LMP Yes, but that 4 seconds just made up for the whole - what was different in the trajectory; it put us back in the right place, I guess. That's phenomenal.

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- 03 15 18 33 CMP Where are we - 39 from the burn.
- 03 15 18 56 CDR How are we coming out? Just like you said - at 1700 pounds on the helium, huh?
- 03 15 19 05 LMP That was the big one. Now it doesn't go down so fast.
- 03 15 19 09 CMP I've got blowdown capability now, don't I?
- 03 15 19 11 CDR Oh, yes.
- 03 15 19 13 CMP We have blowdown from what?
- 03 15 19 15 CDR I think it was a fairly big number.
- 03 15 20 23 CDR They are putting us in a different orbit, though.
- 03 15 20 27 LMP Are they?
- 03 15 20 29 CDR Well, they're putting - -
- 03 15 20 30 LMP ... by 54 and we're showing about 65 by 53 - 1 mile.
- 03 15 20 47 CDR (Singing) Da-da-da-dum, da-deedle-de-de. There's old Cassiopeia.
- 03 15 21 03 CDR You got DSE motion, Al?
- 03 15 21 40 LMP Yes.
- 03 15 21 42 CDR All right. I just forgot to ask.
- 03 15 21 47 LMP ... hell out if ... do.
- 03 15 21 52 CMP ...
- 03 15 22 08 LMP There's Aldebaran. Right straight ahead.
- 03 15 22 15 CMP There you go.
- 03 15 22 19 LMP Menkar.
- 03 15 22 24 CMP Man, look at the ... Wow!
- 03 15 22 30 CDR ... I'm going to look out this window. This is by far the best window. Oh, there's Orion.

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03 15 22 41 CMP Yes, right over here.

03 15 22 44 CDR I can't figure out where Rigel ...

03 15 22 46 CMP There it is.

03 15 22 47 CDR Okay.

03 15 22 48 LMP What's this bright one down here, kind of to the right?

03 15 22 56 CMP Mars. There's Canopus.

03 15 23 03 LMP I don't see Canopus.

03 15 23 05 CMP It's over here. It's over on this corner, down south of Orion. ... there's one with a big --

03 15 23 18 CDR Man, that docking target is bright.

03 15 23 20 LMP Dick, let's see how bright it is.

03 15 23 23 CDR You could dock on that son of a bitch at night with no strain.

03 15 23 28 LMP I know those little - God dog, that thing's bright! Those little things on the handrails are just that bright.

03 15 23 42 CDR Twenty-six minutes.

03 15 23 44 CMP All right.

03 15 23 45 LMP Yes.

03 15 23 50 CMP 59 ...

03 15 23 53 CDR Okay, you did the VERB 49, and you have trimmed, huh?

03 15 23 57 CMP No.

03 15 23 58 CDR Huh?

03 15 24 00 CMP I haven't trimmed in roll.

03 15 24 02 CDR You haven't trimmed in roll. Okay.

03 15 24 14 LMP We've done the sextant star check. Let's take her down to 8 minutes.

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03 15 24 27 CMP Let me check my circuit breakers first.

03 15 24 30 CDR Okay.

03 15 24 32 LMP Yes, this is much better.

03 15 24 37 CMP Where's the flight plan?

03 15 24 40 CDR Right there. What do you need?

03 15 24 43 CMP All right, give me the trim ... firing.

03 15 24 46 CDR Oh.

03 15 24 47 CMP ... plus - 1 foot.

03 15 24 53 CDR Trim X to 1 foot. Otherwise, you just take what you get.

03 15 24 58 CMP I don't see any trim needed. Not the way this beauty's performing.

03 15 25 10 CDR Gee, I hope the LM performs this well.

03 15 25 35 CDR You know, they made a gross tactical error; they should have rigged the LM up so the CSM power could power the IMU. And you could bring the IMU up enroute and align the goddamn thing, you know, maybe get a good drift check on it and all that crap.

03 15 25 54 CMP Okay, all my circuit breakers and everything look good.

03 15 25 58 CDR Do you always take the radio with you and cut the rest of us out?

03 15 26 01 CMP Yes. The rest of us would like to hear it a little bit.

03 15 26 03 LMP You don't like this song (laughter). It's an Al Bean song.

03 15 26 09 CMP We'll let you listen to - whatever the cat's name is.

03 15 26 14 LMP Got to watch the end of it; got to rewind; we ought to shut down. You want to shut down?

03 15 26 19 CMP Can't we hear your song?

03 15 26 20 LMP That's the end of it.

03 15 26 21 CMP We can't hear your song, huh?

03 15 26 23 LMP You want to hear it? Let's hear it again, huh?
(Laughter) You don't like it, I know (laughter).
It's got to be loud to be enjoyed.

03 15 26 31 CMP Let's hear your song.

03 15 26 33 LMP Okay.

03 15 26 34 CDR Okay, Dick. cb STAB CONTROL SYSTEM 8 panel, all closed.

03 15 26 41 CMP All closed.

03 15 26 42 CDR SPS, 12 of them, closed.

03 15 26 45 CMP All closed.

03 15 26 47 CDR Okay, your DELTA-V_C is set correctly on 159.4.

03 15 26 52 CMP Okay.

03 15 26 55 CDR MANUAL ATT, three of them, RATE COMMAND.

03 15 26 59 CMP RATE COMMAND.

03 15 27 02 CDR LIMIT CYCLE, ON.

03 15 27 04 CMP LIMIT CYCLE's ON.

03 15 27 06 CDR ATT DEADBAND, MIN.

03 15 27 07 CMP MIN.

03 15 27 08 CDR RATE, LOW.

03 15 27 09 CMP LOW.

03 15 27 10 CDR TRANS CONTROL POWER, ON.

03 15 27 11 CMP ON.

03 15 27 12 CDR SCS TVC, two of them, to RATE COMMAND.

03 15 27 15 CMP RATE COMMAND.

03 15 27 16 CDR DELTA-V_{CG} to LM/CSM.

03 15 27 19 CMP CSM.

03 15 27 20 CDR TVC GIMBAL DRIVE, PITCH and YAW, AUTO.

03 15 27 23 CMP AUTO.

03 15 27 24 CDR All right, we're holding for 8 minutes.

03 15 27 47 LMP You guys got your things put up? ...?

03 15 27 53 CDR Yes, I think we've got everything in order.

03 15 28 07 CDR If they put this in - If they made up a Hollywood movie, just like this, you wouldn't believe ... --

03 15 28 14 LMP What do you mean?

03 15 28 17 LMP Listening to this music on the back side of the Moon.

03 15 28 19 CDR That's right (laughter).

03 15 28 22 CMP What's the matter --

03 15 28 23 CDR ... that's so flashy and ... --

03 15 28 24 CMP -- you got something against music?

03 15 28 26 CDR No, I'm just saying that --

03 15 28 27 LMP Nobody would buy it. This is corny, cornball; you've got to be hard out there.

03 15 28 32 CDR Say, the biggest thing I missed on Gemini V was not having any music; every once in a while, they'd pipe some up over HF, but - our old nickel-dime tape recorder there, I'd have given my right arm for it.

03 15 28 53 LMP What's the burn time?

03 15 28 55 CMP Burn time is 17 seconds --

03 15 29 00 LMP What ... we going to come on with it --

03 15 29 02 CMP That's interesting. It says burn time plus 1 second. And if the engine performs like it did the last time, it's going to shut down about - on time. That's too short a burn not for us to notice it.

03 15 29 15 LMP They've probably got a handle on it.

03 15 29 17 CMP They may have, yes. Hey, you know we've an awful hot engine. And that very - you know, we may get - If this engine stays like this, we very well may get 24 hours knocked off our translunar coast - -

03 15 29 31 CDR Oh, that would be nice.

03 15 29 33 LMP Oh, I'm sure it will.

03 15 29 35 CDR That had to be an extra hot engine to save the propellant to do it.

03 15 29 47 CDR Yes, why don't you rewind it right now; then we're in good shape.

03 15 29 50 LMP Okay. After the burn's over, we can have a little more music.

03 15 29 59 CMP I like the kind of ship you run, happy.

03 15 30 00 CDR (Laughter)

03 15 30 09 CDR Keep the sailors happy - give them exactly what they want.

03 15 30 18 CMP We sure have.

03 15 30 19 CDR (Laughter)

03 15 30 25 LMP I'll be glad when you shave that Fu Manchu ... off your face (laughter).

03 15 30 27 CMP Yes. That's terrible.

03 15 30 28 CDR Doesn't it look good? I might keep it, now that I hear that comment.

03 15 30 35 LMP You wouldn't like it if you saw yourself. Go look at yourself.

03 15 30 39 CMP It's too low; it needs to be shorter.

03 15 30 43 CDR If it's that repulsive, I ought to wear it.

03 15 30 47 LMP Pete, there isn't enough there to even see it.

03 15 30 49 CMP That's right.

03 15 30 51 CDR God, I hate to shave! Oh! It's going to hurt.

03 15 30 54 CMP No.

03 15 30 55 LMP It'll feel good --

03 15 30 56 CMP Yes, you're right.

03 15 30 57 LMP Take a bath.

03 15 30 59 CMP Yes, hey, I'm going to --

03 15 31 00 LMP -- a bath tonight.

03 15 31 01 CDR Tonight the night?

03 15 31 02 LMP Tonight's the night.

03 15 31 03 CMP ... it down with hot water.

03 15 31 05 LMP Take a bath, shave, get all cleaned up, good night's sleep --

03 15 31 09 CDR (Singing)

03 15 31 14 LMP You got anything else to do tomorrow? All right, that's what we'll do then. We'll go for a little lunar landing, how's that? Unless you got something better in mind - a little surfing at the beach, or something.

03 15 31 25 CDR Hell, yes.

03 15 31 26 CMP How about the backside sand? Go play in the sand on the back side.

03 15 31 29 CDR (Laughter) Yes. Let's take the LM down and land on the back side. Wouldn't that shake them up? (Laughter)

03 15 31 36 LMP We could do our old DOI burn an hour later. We saw something on the back side that was a little more interesting than the front side.

03 15 31 48 CMP Look at that! The glycol pump's back down again.

03 15 31 51 LMP Yes, that baby really cycles it.

03 15 31 53 CDR So far, Dick, I imagine we haven't stabilized yet.
It's got up to 55.

03 15 31 58 CMP What time is it? How much time we got for the burn?

03 15 32 02 LMP Seventeen minutes.

03 15 32 03 CMP Okay.

03 15 32 12 CDR Play that music just before reentry, and get us in
the proper frame of mind. We could get it out and
play it coming down in the chutes.

03 15 32 24 CMP Wouldn't that be cool?

03 15 32 27 LMP Yes, we're here, Houston, listening to a little
music as we come down in the chutes. Everything
is chickieboo - Where's the ship? (Laughter) We
could drive them crazy with that stuff.

03 15 32 51 CMP We ought to get -

03 15 32 53 CDR (Singing)

03 15 33 42 CDR (Singing)

03 15 34 13 CDR Fifteen minutes.

03 15 34 35 CDR Boy, that would just put the frost on the cake,
you know that?

03 15 34 38 LMP What, a 24-hour return?

03 15 34 40 CDR Yes, knock 24 hours off the return. Boy, - -

03 15 34 44 LMP Just think of that.

03 15 34 51 CMP How much more DELTA-V do we need to do it?

03 15 34 55 LMP A thousand - -

03 15 34 56 CDR We got enough right now - we got enough right now, but
we didn't have the reserves for midcourse. We were
within, say, 1 percent of running it out of gas. So - -

03 15 35 09 CMP We're not ... on the SPS for the midcourse anyway,
are we?

- 03 15 35 12 LMP We might - -
- 03 15 35 14 CDR I think for some disperse cases, they got to - I don't know what the reason is, but I can tell you out of my ... because it said we had to have a - it said we had enough to do it right now, but we had zero reserves for midcourse. And it said - you know, if we had a particularly good engine, they wouldn't plan on it. And it said - you know, nobody usually has that good an engine. It sounds like this engine's pretty good - Most engines have been overburning, you know.
- 03 15 35 46 LMP Historically, here, we can shut down 6 seconds early. That baby had to really flat be honking.
- 03 15 36 04 CDR You know, our GDC seems to - Did you just align that thing or something?
- 03 15 36 10 CMP Not too bad when you're standing still.
- 03 15 36 13 LMP Yes, I wonder what the rotation is?
- 03 15 36 15 CMP Well, I guess ...
- 03 15 36 18 LMP I don't understand.
- 03 15 36 28 LMP Give me the water gun, Pete, if you got any - a few moments, while we're talking about things. I could go for another drink.
- 03 15 36 38 CMP That food - you eat a lot of that food, and even though you put water in it, it's still - still dry.
- 03 15 36 45 CDR It's still dry. (Singing)
- 03 15 37 21 CMP About 30 degrees ...
- 03 15 37 27 CDR Yes, any minute.
- 03 15 37 29 CMP Here it comes - -
- 03 15 37 33 LMP How come we're dumping?
- 03 15 37 36 CMP ... about half ... - -
- 03 15 37 38 CDR I'll tell you another thing it is; it's the thrusters firing - -

03 15 37 41 LMP How many - how many - -

03 15 37 42 CDR -- the thrusters put out stuff; I never saw that on Gemini, but these 12 put out some little - something or other.

03 15 37 50 CMP You know you got about - 11 minutes, Al.

03 15 37 54 LMP Okay.

03 15 37 58 CMP You do want to shave between now and then?

03 15 38 05 LMP Yes, I guess. Maybe you ought to - take a couple of pictures.

03 15 38 09 CDR Yes, how about changing attitude here for a minute? There's a couple of good shots right underneath us.

03 15 38 24 CMP I've got a feeling we'll be in ... attitude in ...

03 15 38 36 LMP Watch the whole setup. Don't want you to be scrambling at the last minute.

03 15 38 39 CDR That's right. You always want to stay way ahead; I hope I can do that tomorrow. I'll find out. I don't see why not. We'll be spring-loaded to a think-ahead condition.

03 15 38 56 CMP Maybe he's right.

03 15 39 13 LMP You set the DAP?

03 15 39 16 CDR It's all done. The DAP's set; we're standing by waiting for 8 minutes, and that'll be along in a minute and a half. ... and a half. A minute and a half.

03 15 40 11 LMP Say, you going to have TV on your window in the - when we separate tomorrow?

03 15 40 15 CMP All that stuff, yes.

03 15 40 20 CDR Yes, you just lock it up in that window.

03 15 40 21 CMP Put the monitor over here in my spot right here where I can see you, man.

03 15 40 33 LMP Oh, man, the television ...

03 15 40 42 CDR Okay, Dick, let's have that GDC ALIGN.

03 15 40 51 CMP Okay.

03 15 40 55 CDR Alright. You're on next, Al.

03 15 41 04 LMP I'm ready, babe.

03 15 41 05 CDR He's got his one line circled.

03 15 41 09 LMP ... counts.

03 15 41 11 CDR Okay. No special rules on this burn - 10 degrees per second, 10 degrees in attitude, burn time plus 1 second, trim X-axis to 1 foot.

03 15 41 55 CDR Okay, Al?

03 15 41 56 LMP I'm ready.

03 15 41 57 CDR You can bring on the BUS TIES.

03 15 41 59 LMP Got A - B is on.

03 15 42 03 CDR Okay, Dick, TVC SERVO POWER 1, AC 1/MAIN A.

03 15 42 06 CMP AC 1/MAIN A.

03 15 42 08 CDR TVC SERVO POWER 2, AC 2/MAIN B.

03 15 42 11 CMP 2, AC 2/MAIN B.

03 15 42 12 CDR ROT CONTROL POWER NORMAL, two, to AC.

03 15 42 15 CMP AC.

03 15 42 16 CDR ROT CONTROL POWER DIRECT, two, to OFF.

03 15 42 18 CMP OFF.

03 15 42 19 CDR BMAG MODE, three of them, ATT 1/RATE 2.

03 15 42 21 CMP ATT 1/RATE 2.

03 15 42 23 CDR SPACECRAFT CONTROL to SCS.

03 15 42 25 CMP SCS.

03 15 42 26 CDR RHC number 2, armed.

03 15 42 28 CMP Armed.

03 15 42 31 CDR Okay, you can bring on your GIMBAL MOTORS.
Number 1, PITCH.

03 15 42 36 CMP Mark -

03 15 42 37 CMP On.

03 15 42 39 CDR Number 1, YAW.

03 15 42 40 CMP Mark -

03 15 42 41 CMP On.

03 15 42 42 CDR Okay, verify your trim: plus 1.45 - minus 66.

03 15 42 53 CMP Okay.

03 15 42 55 CDR Alright. Verify MTVC.

03 15 43 00 CMP MTVC.

03 15 43 02 CDR Okay. SPACECRAFT CONTROL to CMC.

03 15 43 06 CMP CMC, zero.

03 15 43 08 CDR THC, clockwise.

03 15 43 11 CMP Clockwise.

03 15 43 12 CDR Verify no MTVC.

03 15 43 13 CMP No MTVC.

03 15 43 14 CDR Give me GIMBAL MOTORS number 2.

03 15 43 17 LMP I'm ready.

03 15 43 18 CDR PITCH 2, mark -

03 15 43 19 LMP On.

03 15 43 21 CDR YAW 2, mark -

03 15 43 22 LMP On.

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03 15 43 23 CDR Okay, verify the trim.

03 15 43 27 CMP Trim. ... to wiggle that baby around.

03 15 43 37 CDR Verify MTVC.

03 15 43 46 CMP MTVC.

03 15 43 47 CDR TRANSLATIONAL HAND CONTROLLER, NEUTRAL.

03 15 43 49 CMP NEUTRAL. Trim zero.

03 15 43 51 CDR Verify no MTVC.

03 15 43 53 CMP No MTVC.

03 15 43 55 CDR Okay. Verify GPI returns to zero.

03 15 44 01 CMP Zero.

03 15 44 02 CDR ROT CONTROL POWER NORMAL, two, AC/DC.

03 15 44 05 CMP AC/DC.

03 15 44 07 CDR ROT CONTROL POWER DIRECT, two of them, MAIN A/MAIN B.

03 15 44 09 CMP MAIN A/MAIN B.

03 15 44 10 CDR BMAG MODE, three of them, to RATE 2.

03 15 44 12 CMP RATE 2.

03 15 44 13 CDR And I'll give her a PRO, ready?

03 15 44 15 CMP Roger.

03 15 44 18 CDR That's it. BMAG MODE, three of them, ATT 1/RATE 2.

03 15 44 21 CMP ATT 1/RATE 2.

03 15 44 22 CDR And I'll give her an ENTER. 204. Are we ready?

03 15 44 28 CMP Ready.

03 15 44 29 CDR Go.

03 15 44 31 CDR/CMP 2, minus 2, 0. Plus 2, minus 2, 0.

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03 15 44 44 CMP Four ...

03 15 44 47 CDR Okay, we're trim. Three minutes and 58 seconds and counting; FDAO SCALE, 5/5.

03 15 44 53 CMP 5/5.

03 15 44 54 CDR LIMIT CYCLE, OFF.

03 15 44 55 CMP OFF.

03 15 44 56 CDR RATE, HIGH.

03 15 44 57 CMP RATE, HIGH.

03 15 44 58 CDR Let's update the DET.

03 15 45 00 CMP It's right on.

03 15 45 01 CDR Yes. All right, only difference between this burn and the other is we got 19 seconds' worth of ullage.

03 15 45 10 LMP That's a nice long - -

03 15 45 11 CDR Nineteen-second ullage and 17-second burn. Okay?

03 15 45 13 CMP Burn, baby, burn.

03 15 45 14 CDR Yes.

03 15 45 18 LMP Okay. You got a PRO; I've got to get my heaters down ... all that stuff. They're AUTO.

03 15 45 27 CDR Okay, Al, we're just standing by for 2 minutes.

03 15 45 28 LMP - - B or A in, which first?

03 15 45 31 CMP A.

03 15 45 34 LMP You go to B or just use A?

03 15 45 35 CMP I'll go to B.

03 15 45 36 CDR Okay.

03 15 45 37 CMP Use both banks, yes.

03 15 45 41 CDR That's right. Have to keep the burn up in case something goes ... to it.

03 15 45 47 LMP AC's got a problem, too.

03 15 46 23 CMP Still seem to be venting something.

03 15 46 26 LMP That's our thrusters.

03 15 46 29 CMP Is it kicking stuff out?

03 15 46 30 LMP Yes.

03 15 46 32 CMP I don't know whether they kick stuff off the side of the spacecraft, or - or - or whether they manufacture when they - their products combust.

03 15 46 40 CDR Okay, Dick. DELTA-V THRUST A switch to NORMAL.

03 15 46 43 CMP THRUST A's NORMAL.

03 15 46 45 CDR TRANSLATIONAL HAND CONTROLLER, armed.

03 15 46 47 CMP Armed.

03 15 46 48 CDR Both RHCs armed.

03 15 46 49 CMP Armed.

03 15 47 01 LMP -- COMMAND RESET.

03 15 47 02 CDR Okay, stand by for the DSKY blanks.

03 15 47 04 LMP All right - Man, I agree with you, Dick.

03 15 47 06 CMP You in HIGH BIT RATE, Al?

03 15 47 09 LMP What?

03 15 47 10 CMP Are you in HIGH BIT RATE?

03 15 47 11 LMP Certainly am.

03 15 47 13 CMP Oh. I didn't see the switch.

03 15 47 15 LMP Okay, keep an eye on me, babe; you never know.

03 15 47 18 CDR Will you hold that until 19 seconds, just before trim?

03 15 47 22 LMP You never know.

03 15 47 27 CDR Do-te-do-do-do-do.

03 15 47 43 LMP Okay, they're going to want the residuals so hold that - ... Flash. ... the watch. Okay, you're standing by for DSKY blanks; EMS NORMAL, and a PROCEED.

03 15 48 00 CMP Okay. Move it to PROCEED.

03 15 48 02 CDR I've got the PROCEED.

03 15 48 12 CMP Okay, DSKY blank - average g's on.

03 15 48 25 CMP EMS to NORMAL; stand by to ullage.

03 15 48 29 CMP Ullage.

03 15 48 31 LMP You can feel it, can't you?

03 15 48 32 CMP Yes.

03 15 48 34 LMP 10, 9 - makes a creaking.

03 15 48 40 CMP 8, 7, 6, 5 - arm. Standing by -

03 15 48 47 LMP ... on - -

03 15 48 48 CMP IGNITION.

03 15 48 49 CMP - - You got both ball valves.

03 15 48 50 LMP There's ... other thing.

03 15 48 51 CDR You've got that.

03 15 48 52 CMP 3, 4, 5 - -

03 15 48 54 LMP ... looks good.

03 15 48 55 CMP 6, 7, 8 - -

03 15 48 57 LMP Excellent.

03 15 48 58 CMP - - 9, 10, 11, 12, 13, 1⁴, 15 - It's going to shut off on time - 16, 17 - -

03 15 49 05 CMP/CDR SHUTDOWN!

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03 15 49 06 LMP It shut down early.

03 15 49 07 CMP A bank NORMAL.

03 15 49 08 LMP All ball - all ... valves are off.

03 15 49 09 CDR TVC SERVO POWER.

03 15 49 10 CMP GIMBAL MOTORS.

03 15 49 11 LMP GIMBAL MOTORS.

03 15 49 12 CMP YAW 2.

03 15 49 13 LMP Mark -

03 15 49 14 LMP OFF.

03 15 49 15 CMP YAW - PITCH 2, rather.

03 15 49 16 LMP Mark -

03 15 49 17 LMP OFF.

03 15 49 18 CMP YAW 1.

03 15 49 19 LMP Mark -

03 15 49 20 LMP OFF.

03 15 49 21 CMP PITCH 1.

03 15 49 22 LMP Mark -

03 15 49 23 LMP OFF.

03 15 49 24 CDR MAIN BUS TIES, Al.

03 15 49 25 LMP Okay. Here they come.

03 15 49 26 CDR All right, let me copy them.

03 15 49 27 CMP Plus 30, plus 1.

03 15 49 29 CDR Okay. Get our average-g ...

03 15 49 34 LMP Plus 3.

03 15 49 37 CMP Minus 4.4 on the EMS.

03 15 49 41 CDR Wait a minute - ... plus 1.

03 15 49 44 CMP What was it?

03 15 49 46 CDR Minus 4.2?

03 15 49 48 CMP It's 4.4 on the EMS, Pete.

03 15 49 50 CDR Minus 4.4?

03 15 49 51 CMP 4.4.

03 15 49 53 CDR With a minus sign?

03 15 49 54 CMP Yes, with a minus.

03 15 49 56 CDR ... valves are about to close.

03 15 50 00 LMP I can see these ball valves start to open before we get thrust.

03 15 50 04 CMP Yes. I'm sure you can.

03 15 50 06 LMP About halfway open.

03 15 50 07 CMP Where's the attitude I'm supposed to go to?

03 15 50 09 CDR All right, just a second. You're supposed to go to roll, 180, 269.

03 15 50 30 LMP Pete has the checklist, Dick.

03 15 50 33 CMP Okay. Just a second.

03 15 50 35 LMP Here we go, 66.3 by 54.7.

03 15 50 38 CMP Okay, wait a minute. ... 66.3 by 54.7; that's what the - that's what this was - 64.9 by 53 - -

03 15 50 53 LMP Hey, look at that - look at this crazy thing! Look at that dome. Right here. That big ... there.

03 15 51 01 CDR Yes.

03 15 51 02 LMP Look at the cliffs.

03 15 51 06 CDR That's a big crater.

03 15 51 09 LMP Gosh damn! You're going to - look at this ... Christ sakes!

03 15 51 16 CDR I didn't know that thing was Armstrong's ...

03 15 51 19 CMP ... okay ... do the rest of the checklist.

03 15 51 21 LMP Gee, that's broken. Heeeeeee, let's read the rest of it, Pete.

03 15 51 31 CDR BUS TIES.

03 15 51 33 LMP They're OFF.

03 15 51 34 CDR EMS FUNCTION, OFF; EMS MODE, STANDBY.

03 15 51 36 LMP It's done.

03 15 51 37 CDR LIMIT CYCLE, ON.

03 15 51 38 LMP It's ON.

03 15 51 39 CDR ATT DEADBAND, MAX.

03 15 51 40 LMP MAX.

03 15 51 41 CDR TRANS CONTROL POWER, OFF.

03 15 51 42 LMP OFF.

03 15 51 43 CDR ROT CONTROL POWER DIRECT, two, OFF.

03 15 51 45 LMP Two OFF.

03 15 51 47 CDR BMAG MODES, three, RATE 2.

03 15 51 48 LMP RATE 2.

03 15 51 49 CDR PCM BIT RATE, LOW, Al.

03 15 51 51 LMP It'll be LOW in a minute.

03 15 52 08 CMP Fuel is 35.9 - 35.4 - the oxidizer's 35.9, if you want to call that.

03 15 52 21 CDR Fuel's 35.4 -

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03 15 52 23 LMP Unbalance is 110 - increase.

03 15 52 24 CDR Make it full increase.

03 15 52 30 CMP How's the balance, Al?

03 15 52 32 LMP Good.

03 15 52 33 CMP Have we been at increase the whole - -

03 15 52 34 CDR Yes, they're - -

03 15 52 35 CMP That's right.

03 15 52 36 CDR - - they're full increase.

03 15 52 37 CMP Just what they're supposed to be doing.

03 15 52 38 CDR Yes. ...

03 15 52 42 LMP Wait a minute - Let me have this page.

03 15 52 49 CDR You - you're ahead a whole - hour ahead. There you go. 180, 269, 0.

03 15 53 00 LMP Increase now 110.

03 15 53 07 CDR We're doing the best we can.

03 15 53 08 CMP It's going to.

03 15 53 24 CDR It's funny to see this big machine doing like this - look out the window and see it roll. Haven't been near a body in so long.

03 15 53 35 CMP Hey, you never know you're maneuvering out in space, do you?

03 15 53 38 CDR No.

03 15 53 39 CMP Except for the Earth going ...

03 15 53 41 LMP ... go by.

03 15 53 42 CMP Now you look out the window and it's - kind of - weird.

03 15 53 45 CDR Here's a goddamn cliff and a bunch of mountains. Look at them!

03 15 53 51 MS Look at - that's - -

03 15 53 52 CDR That's that one I wanted some pictures of.

03 15 53 55 LMP We got pictures of it.

03 15 53 56 CDR No, that's another better set of them.

03 15 53 58 LMP I took pictures - -

03 15 53 59 CMP No, that's the same bunch.

03 15 54 00 CDR Yes, but we're closer is what I'm saying.

03 15 54 01 CMP Give me the camera then, quickly.

03 15 54 03 CDR Here.

03 15 54 04 LMP ... 80 degrees - -

03 15 54 06 CMP 80 and - What time is it?

03 15 54 07 CDR Oh, about - how many minutes after?

03 15 54 09 CMP About 30.

03 15 54 12 LMP About 20, about 20.

03 15 54 14 CDR Thirty-nine and it's now 53 - at 14 minutes, should be five-sixths.

03 15 54 22 CMP ...

03 15 54 24 CDR Go ahead. Here you go.

03 15 54 26 LMP Get some good ones here.

03 15 54 27 CMP I can give you a 250th - -

03 15 54 28 CDR Hell, my window's all foggy.

03 15 54 33 CMP Hey, the window's all foggy.

03 15 54 36 CDR Okay.

03 15 54 37 CDR Some day I'm going to just up and get in the space-craft design business and - -

03 15 54 41 LMP Splendid.

03 15 54 45 CMP God, I wish somebody would.

03 15 54 47 CDR There's one thing we didn't do. Did we do a VERB 66?

03 15 54 50 LMP No.

03 15 54 56 CMP Thirty-nine -

03 15 55 00 CDR Hey, you know something? That ain't on here either. I'm going to put that on this damned checklist.

03 15 55 06 CMP What's that, Pete?

03 15 55 08 CDR To lock those hand controllers. It's not on any of them - that I know of.

03 15 55 18 CDR MAIN BUS TIES are OFF. Null - null residuals - and right here.

03 15 55 40 CDR What do you call your - your - translation hand controller?

03 15 55 44 CMP THC.

03 15 55 45 CDR Yes. Okay. That won't happen again.

03 15 56 02 CDR Okay, we get them in 6 minutes. But that clock is so bad now. 56:10. 56:31.

03 15 56 34 CDR We got to pitch - 269.

03 15 56 39 LMP That's right?

03 15 56 40 CDR Yes.

03 15 56 45 CDR You want a VERB 49, kill it, or are you going to - -

03 15 56 47 CMP No, just stop it and then just give it to the DAP.

03 15 56 50 CDR Okay.

03 15 57 03 LMP What's that? That what-you-call-it? That flashing ...?

03 15 57 10 CDR That old ... or whatever it is?

03 15 57 13 LMP But I'm ... - -

03 15 57 15 CMP You got the HIGH GAIN ANTENNA in REACQ?

03 15 57 18 CDR Yes, we're all squared away.

03 15 57 48 CDR Say, Al?

03 15 57 49 LMP Yes, sir.

03 15 57 50 CDR You going to have to start charging BAT B.

03 15 57 53 LMP Okay.

03 15 57 54 CDR Might as well put it on now, huh?

03 15 57 56 LMP Okay.

03 15 57 57 CDR It's supposed to go on at 88:12. Might as well get it on.

03 15 58 03 LMP It's REV 3, isn't it?

03 15 58 05 CMP Huh?

03 15 58 06 LMP This is REV 3, is it not?

03 15 58 10 CMP Yes, this is REV 3.

03 15 58 12 CDR Yes. LOI 2 started REV 3.

03 15 58 19 LMP BAT B, you say?

03 15 58 21 CDR Yes.

03 15 58 22 CMP Whoo! What a sight! Whoo!

03 15 58 27 LMP Okay, I'm charging BAT B as of right now.

03 15 58 30 CDR Now, we're going to stay at 60, for -

03 15 58 35 LMP There you go.

03 15 58 39 CMP, Al?

03 15 58 45 LMP I've got to ...

03 15 58 47 CDR That's not a bad idea; I'll do it after you.

03 15 58 58 CDR You got BAT B charging?

03 15 59 00 LMP That's right.

03 15 59 10 CDR Okay, and you're taking targets of opportunity.

03 15 59 12 CMP No. I'm just taking ... we did yesterday. And I'm left with a few here. Selected ones.

03 15 59 20 CDR Okay. I guess what we should do, Dick, is just vent that baby for a couple of seconds afterwards to shut her off.

03 15 59 27 CMP I like the way that they're keeping it clean myself.

03 15 59 45 CDR It's a different Moon over here, and it's not - never apparent to me when it starts changing.

03 15 59 51 CMP Are you still picking up some mares here?

03 15 59 55 CDR Yes. Man, are there some big white boulders down there!

03 16 00 05 CDR What a big pile of - -

03 16 00 06 CMP Here you go, Pete.

03 16 00 07 CDR Jesus, they're big boulders!

03 16 00 12 CMP Pete?

03 16 00 13 CDR What?

03 16 00 14 CMP Here you go.

03 16 00 15 CDR Okay. Going to have - Wait a minute. I'll just put it - put it away - Whoops - put it away for a second, ... AOS here.

03 16 00 36 CMP Pete, you're missing - See those big boulders from here.

03 16 01 16 LMP Thirty-nine plus - 40, 39 - 40 minutes - -

03 16 01 24 CDR We ought to have them; we got them.

03 16 01 26 LMP Okay.

TIME SKIP

03 17 12 44 CDR ... the hose in?

03 17 12 48 LMP Okay.

03 17 12 49 CDR You got the COMM connector in the - -

03 17 12 50 LMP Yes.

03 17 12 51 CDR - - You got everything you need?

03 17 12 52 LMP Yes.

03 17 12 53 CDR FLOODLIGHTS, ALL.

03 17 12 54 LMP Okay.

03 17 12 55 CDR Window shades down. I'll get this one over here.

03 17 12 57 LMP Okay.

03 17 13 02 LMP Okay. ...

03 17 13 04 CDR We just go AOS - LOS?

03 17 13 11 CMP Yes.

03 17 13 12 CDR Man, those windows sure are bright.

03 17 13 14 LMP ... like that.

03 17 13 56 CMP Okay. •

03 17 13 57 LMP Now, wait a minute.

03 17 14 05 CDR DESCENT H₂O, OPEN?

03 17 14 08 LMP OPEN. ...

03 17 14 19 CDR Okay?

03 17 14 21 LMP Here's the eyepatch - they're in this bag.

03 17 14 25 CDR All right.

03 17 14 29 LMP ...

03 17 14 48 LMP Better leave them right where they are. ... data ...

03 17 14 54 CDR ...

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03 17 14 56 LMP ... that one ...
03 17 15 20 LMP ... put it on my ... Okay?
03 17 15 27 CDR Yes. We don't have to do any burns tomorrow, which
... me ...
03 17 15 34 LMP I didn't put them up yet. ... until I put
these things up.
03 17 15 47 CDR Okay.
03 17 15 49 LMP ...
03 17 16 10 CDR Hey, you're going to make it look just like the LMS.
03 17 16 12 LMP ...
03 17 16 14 CDR Okay. COAS goes up. Yes.
03 17 16 22 LMP ...
03 17 16 24 CDR All right. Huh?
03 17 16 26 LMP ...
03 17 16 27 CDR No, that's a good card. We don't need that up yet,
though. You want to leave that up for EVA and
everything?
03 17 16 33 LMP Yes.
03 17 16 35 CDR Okay.
03 17 16 38 LMP ...
03 17 16 47 CDR What you doing, Dick?
03 17 16 49 CMP Getting set up for my P22.
03 17 16 55 LMP What do I hear running down there?
03 17 16 59 CMP What do you hear running?
03 17 17 00 LMP Yes.
03 17 17 01 CMP What do you mean, running?

03 17 17 03 LMP Sounds like I heard a pump come on or something.
I must be crazy.

03 17 17 06 CMP Heard a thruster firing, maybe.

03 17 17 08 LMP Oh, okay. All right. What else do you need? In here?

03 17 17 16 CDR ...

03 17 17 18 LMP Well, here; I'll hold this. I can read it to you.

03 17 17 20 CDR ...

03 17 17 51 CDR 89:20. What time is it over there, Dick?

03 17 17 56 CMP 89:17:58 - 59.15.

03 17 18 00 CDR Okay. Okay. DESCENT O₂, OPEN.

03 17 18 10 LMP DESCENT, OPEN. Coming OPEN.

03 17 18 12 CDR And DESCENT H₂O, OPEN.

03 17 18 14 LMP OPEN.

03 17 18 15 CDR Okay. CABIN REPRESS to AUTO. Is that the big bang?

03 17 18 18 LMP Yes, here comes the bang.

03 17 18 20 CMP Okay.

03 17 18 22 LMP ...

03 17 18 24 CMP Now, that sounded strange.

03 17 18 26 LMP I went ...

03 17 18 29 CDR LANDING ANTENNA to AUTO.

03 17 18 31 LMP ... CABIN REPRESS ...

03 17 18 33 CDR Not a word about it. I'm sorry.

03 17 18 36 LMP ...

03 17 18 39 CDR Okay. LANDING ANTENNA to AUTO; it's in AUTO?

03 17 18 42 LMP ...

03 17 18 44 CDR All right, just a minute - That's ...
03 17 18 48 LMP Okay?
03 17 18 49 CDR Unstow temporary stowage bag and give it to CSM.
Unstow TSB, temporary stowage bag?
03 17 18 58 LMP ... bottom of the box ... Here's what you put all
the goodies in tomorrow, Dick Gordon.
03 17 19 04 CMP What goodies?
03 17 19 05 LMP Oh, anything you want to give us.
03 17 19 07 CDR Yes, the McDivitt purse.
03 17 19 08 LMP ... Here it is, here it is; ...
03 17 19 14 CDR I'll try ... maneuver ...
03 17 19 15 CMP What do you mean, that I want to give you?
03 17 19 17 LMP All that stuff ... transfer over.
03 17 19 20 CMP What stuff? I don't transfer any stuff over any more.
03 17 19 22 LMP Sure do.
03 17 19 23 CMP You already transferred it.
03 17 19 25 CDR No.
03 17 19 26 LMP ...
03 17 19 29 CMP Oh, I suggest --
03 17 19 30 LMP ... better get going.
03 17 19 31 CMP Huh?
03 17 19 32 LMP We'll wrap it up tonight.
03 17 19 33 CDR We'll wrap it up tonight, Dick.
03 17 19 34 LMP ...
03 17 19 37 CMP Okay.

03 17 19 40 CDR Unstow ISA and install over PLSS recharge station.

03 17 19 45 LMP ...

03 17 19 58 LMP ...

03 17 20 10 LMP Right here, some place - ...

03 17 20 45 LMP And one more -

03 17 20 47 CDR ...

03 17 20 56 LMP Don't we have to recycle that suit flow deal to get that - whole thing?

03 17 21 19 LMP Okay. They all look good, Pete.

03 17 21 22 CDR That's good. Okay. Verify cb's per initial activation status check.

03 17 21 30 LMP ... Maybe we can do it later after ... held over from yesterday.

03 17 21 43 CDR Been held over from yesterday.

03 17 21 44 LMP Okay, ...

03 17 21 46 CDR All right.

03 17 21 47 LMP ...

03 17 21 51 CDR All right; 16, your top row should be open.

03 17 21 55 LMP ...?

03 17 21 56 CDR No. 16, your top row should be open.

03 17 21 59 LMP ... all open.

03 17 22 01 CDR FLOOD should be in, and ASA in on the second one.

03 17 22 04 LMP It is.

03 17 22 05 CDR On the third one, everything should be out except CABIN REPRESS.

03 17 22 08 LMP That's right.

03 17 22 09 CDR And on the fourth one, you should have S-BAND ANTENNA.

03 17 22 11 LMP In?

03 17 22 12 CDR DC BUS VOLT.

03 17 22 13 LMP In.

03 17 22 16 CDR DECA - DESCENT ECA.

03 17 22 18 LMP In.

03 17 22 20 CDR And the last three.

03 17 22 21 LMP ... and I'll read to you.

03 17 22 24 CDR Okay.

03 17 22 26 LMP All open on the first two.

03 17 22 30 CDR All open on the first two rows.

03 17 22 33 LMP Next row ... STANDBY RENDEZVOUS RADAR HEATER?

03 17 22 38 CDR Yes.

03 17 22 39 LMP And LANDING RADAR HEATER?

03 17 22 41 CDR Yes.

03 17 22 42 LMP ...

03 17 22 44 CDR Now UTILITY is out. They wanted it left out.

03 17 22 49 LMP ...

03 17 22 53 CDR Put a circle around it.

03 17 22 55 LMP All right. ... next three are in.

03 17 23 07 CDR Okay.

03 17 23 09 LMP Next three are out.

03 17 23 10 CDR They are.

03 17 23 11 LMP Next one's in, DESCENT ECA, and the last one's in.
And that should be all.

03 17 23 15 CDR Okay, that's it. I'll read that to you. Oh, okay.

03 17 23 20 LMP ...

03 17 23 21 CDR Yes.

03 17 23 22 LMP RENDEZVOUS RADAR GYRO SELECT, PRIMARY?

03 17 23 24 CDR Yes. Or - Well, you want to just leave it? We have done that whole thing.

03 17 23 27 LMP We have done that -

03 17 23 28 CDR Yes. It's all that way. You want to do it again? Might as well. Here we go.

03 17 23 35 LMP ...

03 17 23 36 CDR Yes, PRIMARY.

03 17 23 37 LMP ...

03 17 23 38 CDR Yes.

03 17 23 39 LMP FDAO ALIGN switch. We know we have that okay. ...

03 17 23 51 CDR Hey, move this ...

03 17 23 53 LMP Okay ...

03 17 24 00 LMP MASTER ARM ... OFF?

03 17 24 01 CDR Yes.

03 17 24 02 LMP ASCENT HELIUM SELECTOR, BOTH?

03 17 24 04 CDR Yes.

03 17 24 05 LMP STAGE, SAFE, guarded?

03 17 24 06 CDR Yes.

03 17 24 07 LMP Okay, do COMM ...

03 17 24 10 CDR OFF, OFF.

03 17 24 12 LMP TTCA, Commander, JETS?

03 17 24 13 CDR Yes.

03 17 24 14 LMP TIMER ...; LIGHTS, OVERRIDE; ... CROSS-POINTER SCALE, HIGH MULTIPLY?

03 17 24 22 CDR Yes.

03 17 24 23 LMP LANDING RADAR/COMPUTER - RATE/ERR MONITOR, LANDING RADAR/COMPUTER; ATTITUDE MONITOR, PGNS; GUIDANCE CONTROL, PGNS; MODE SELECT, LANDING RADAR.

03 17 24 36 CDR Yes.

03 17 24 37 LMP RANGE/ALTITUDE MONITOR, ALTITUDE/ALTITUDE RATE.

03 17 24 39 CDR Yes.

03 17 24 40 LMP SHAFT/TRUNNION, plus or minus 50.

03 17 24 41 CDR Okay.

03 17 24 42 LMP RATE SCALE, 25.

03 17 24 43 CDR Yes.

03 17 24 44 LMP ACA PROP, ENABLE.

03 17 24 45 CDR Yes.

03 17 24 46 LMP THROTTLE CONTROL, AUTO.

03 17 24 47 CDR Yes.

03 17 24 48 LMP MANUAL THROTTLE, COMMANDER.

03 17 24 49 CDR Yes.

03 17 24 50 LMP ENGINE ARM, OFF.

03 17 24 51 CDR Whoo!

03 17 24 52 LMP ATTITUDE/TRANSLATION, 2 JETS.

03 17 24 53 CDR Yes.

03 17 24 54 LMP BALANCE COUPLE, ON.

03 17 24 55 CDR Yes.

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03 17 24 56 LMP ASCENT HELIUM REGs 1 and 2, gray.

03 17 24 57 CDR Yes.

03 17 24 58 LMP DESCENT HELIUM REGs 1, gray.

03 17 24 59 CDR Yes.

03 17 25 00 LMP 2, barber pole.

03 17 25 01 CDR ...

03 17 25 02 LMP PROPELLANT QUANTITY MONITOR, OFF.

03 17 25 05 CDR OFF.

03 17 25 06 LMP PROPELLANT TEMP/PRESS MONITOR, ASCENT.

03 17 25 07 CDR Yes.

03 17 25 08 LMP HELIUM MONITOR, OFF.

03 17 25 09 CDR Yes.

03 17 25 10 LMP ABORT, ABORT STAGE, flush, guarded.

03 17 25 11 CDR Yes.

03 17 25 12 LMP SYSTEM A, B, ASCENT. All this stuff is --

03 17 25 15 CDR ...

03 17 25 16 LMP -- Barber pole, gray, barber pole, gray. We know that. This is enabled; this is in HELIUM.

03 17 25 20 CDR TEMP/PRESSURE, HELIUM. Yes. ACA PROP --

03 17 25 22 LMP Okay.

03 17 25 23 CDR -- ENABLE. RATE/ERROR MONITOR, LANDING RADAR/ COMPUTER; ATTITUDE MONITOR to AGS.

03 17 25 27 LMP AGS. Go.

03 17 25 28 CDR GLYCOL, PUMP 2.

03 17 25 29 LMP 2.

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03 17 25 30 CDR SUIT FAN, 1
03 17 25 31 LMP 1.
03 17 25 32 CDR O₂/H₂O QUANTITY, ASCENT 2.
03 17 25 33 LMP Right.
03 17 25 34 CDR ENGINE GIMBAL, ENABLE; that's over on my side --
03 17 25 35 LMP ENABLE.
03 17 25 36 CDR DESCENT ENGINE COMMAND OVERRIDE, OFF.
03 17 25 37 LMP OFF.
03 17 25 38 CDR LANDING ANTENNA, AUTO.
03 17 25 39 LMP AUTO.
03 17 25 40 CDR RADAR TEST, OFF.
04 17 25 41 LMP OFF.
03 17 25 42 CDR TEST MONITOR, ALTITUDE XMTR.
03 17 25 43 LMP ALTITUDE XMTR.
03 17 25 45 CDR SLEW RATE, HIGH.
03 17 25 46 LMP SLEW RATE, HIGH.
03 17 25 47 CDR RENDEZVOUS RADAR, SLEW.
03 17 25 48 LMP SLEW.
03 17 25 49 CDR DEADBAND, MIN.
03 17 25 50 LMP MIN.
03 17 25 55 CDR GYRO TEST, ROLL.
03 17 25 56 LMP ROLL.
03 17 25 57 CDR ATTITUDE CONTROL, three, MODE CONTROL.
03 17 25 59 LMP MODE CONTROL.

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03 17 26 00 CDR MODE CONTROL, both, OFF.
03 17 26 02 LMP OFF.
03 17 26 05 CDR MODE CONTROL, OFF.
03 17 26 06 LMP It's OFF.
03 17 26 07 CDR EVENT TIMER CONTROL, STOP.
03 17 26 09 LMP STOP.
03 17 26 10 CDR TEMP MONITOR, LANDING.
03 17 26 12 LMP LANDING.
03 17 26 13 CDR RCS SYSTEM A/B - two QUADS, OFF.
03 17 26 15 LMP They're OFF.
03 17 26 16 CDR LIGHTING SIDE PANELS, OFF.
03 17 26 18 LMP OFF.
03 17 26 19 CDR FLOODLIGHTS, ALL.
03 17 26 20 LMP ALL.
03 17 26 21 CDR OVERHEAD/FORWARD, BRIGHT.
03 17 26 22 LMP BRIGHT.
03 17 26 23 CDR EXTERIOR LIGHT, OFF.
03 17 26 24 LMP OFF.
03 17 26 25 CDR LAMP/TONE TEST, OFF.
03 17 26 26 LMP OFF.
03 17 26 27 CDR X-POINTER SCALE, HIGH MULT.
03 17 26 28 LMP HIGH MULT.
03 17 26 29 CDR ACA/4 JET, two, ENABLE.
03 17 26 31 LMP Two, ENABLE.

03 17 26 32 CDR TTCA/TRANSLATION, two, ENABLE.

03 17 26 34 LMP Two, ENABLE.

03 17 26 35 CDR RENDEZVOUS ANTENNA RELEASE, stowed.

03 17 26 38 LMP Is it? Okay.

03 17 26 40 CDR AOT - CL, ANGLE, all zeros. That's done.

03 17 26 44 LMP OKAY.

03 17 26 45 CDR How do you know that - Oh, yes ... - -

03 17 26 47 LMP CL, that's all zips. Okay. Hey, let me look out here at night just a minute, before we get this thing. Well, we'll get that later. Clean up those - Oh, screw it, let's keep on the time line.

03 17 26 58 CDR You're looking right ...

03 17 26 59 LMP I know I've got a target, but the hell with it; we'll wait.

03 17 27 03 CDR AGS.

03 17 27 04 LMP Yes.

03 17 27 09 CDR TTCA, JETS.

03 17 27 10 LMP Yes.

03 17 27 11 CDR AGS STATUS, OFF.

03 17 27 12 LMP OFF.

03 17 27 13 CDR POWER/TEMP MONITOR, ED/OFF.

03 17 27 15 LMP ED/OFF.

03 17 27 16 CDR INVERTER, OFF.

03 17 27 17 LMP It's not ED/OFF, either. INVERTER, OFF.

03 17 27 22 CDR DESCENT POWER, five, talkback barber pole.

03 17 27 24 LMP Barber pole.

03 17 27 25 CDR ASCENT POWER, four, talkback barber pole.

03 17 27 28 LMP Barber pole.

03 17 27 29 CDR UPLINK SQUELCH, ENABLE.

03 17 27 30 LMP ENABLE.

03 17 27 31 CDR AUDIO CONTROL, NORMAL.

03 17 27 32 LMP It is.

03 17 27 33 CDR S-BAND T/R, OFF.

03 17 27 34 LMP It's all - all our COMM is okay; I'm looking at it right now. It's off, it's OFF, it's high. That's in OFF. Everything's okay on the COMM.

03 17 27 41 CDR S-BAND MODULATE, PM; XMTR, OFF.

03 17 27 43 LMP All right.

03 17 27 44 CDR RECEIVER, OFF; POWER AMP, OFF; VOICE, OFF; PCM, OFF; RANGE, OFF/RESET; VHF A, OFF, SQUELCH, 3; VHF B, OFF, SQUELCH, 3; TELEMETRY, OFF, HIGH; RECORDER, OFF; VHF, AFT; TRACK MODE, OFF; PITCH, 75; YAW, 12 - or minus --

03 17 27 59 LMP I got it.

03 17 28 00 CDR -- MINUS 75, MINUS 12; S-BAND ANTENNA, AFT.

03 17 28 03 LMP Okay.

03 17 28 04 CDR Okay. SUIT GAS DIVERTER, PULL/EGRESS.

03 17 28 06 LMP EGRESS.

03 17 28 07 CDR CABIN REPRESS, AUTO.

03 17 28 08 LMP AU - AUTO

03 17 28 09 CDR PLSS FILL, CLOSE.

03 17 28 10 LMP CLOSE.

03 17 28 11 CDR PRESS REG in A and B - PRESS REG A and B, CLOSED.

03 17 28 13 LMP CLOSED.

03 17 28 14 CDR DESCENT O₂, OPEN.

03 17 28 15 LMP OPEN.

03 17 28 16 CDR ASCENT O₂, two, CLOSE.

03 17 28 18 LMP CLOSE.

03 17 28 19 CDR SUIT ISOLATION, two, SUIT DISCONNECT.

03 17 28 21 LMP SUIT DISCONNECT.

03 17 28 22 CDR SUIT CIRCUIT RELIEF, AUTO.

03 17 28 23 LMP SUIT CIRCUIT RELIEF, AUTO.

03 17 28 25 CDR CABIN GAS RETURN, AUTO.

03 17 28 27 CDR CO₂ CANISTER SELECT, PRIM.

03 17 28 29 LMP PRIMARY.

03 17 28 30 CDR PRIMARY and SECONDARY CO₂ CANISTER, CLOSED.

03 17 28 32 LMP CLOSED.

03 17 28 33 CDR WATER SEP SELECT, PULL/SEP 2.

03 17 28 35 LMP PULL/SEP 2.

03 17 28 38 CDR Hey, Dick?

03 17 28 39 CMP Yes.

03 17 28 40 CDR What's the cabin PRESS?

03 17 28 45 LMP ... 902. Last night ... that's what I figured would happen.

03 17 28 52 CMP It's about 5.1 - hasn't moved a hair.

03 17 28 57 CDR Okay.

03 17 28 58 CMP Closed down to three-tenths.

03 17 28 59 CDR Okay.

03 17 29 00 CMP Make that four.

03 17 29 01 CDR ASCENT H₂O, CLOSED.

03 17 29 03 LMP CLOSED.

03 17 29 05 CDR SECONDARY EVAP FLOW, CLOSED.

03 17 29 07 LMP CLOSED.

03 17 29 09 CDR PRIMARY EVAP FLOW, two, CLOSED.

03 17 29 10 LMP CLOSED.

03 17 29 11 CDR DESCENT H₂O, OPEN.

03 17 29 13 LMP OPEN.

03 17 29 14 CDR WATER TANK SELECT, DESCENT.

03 17 29 15 LMP DESCENT.

03 17 29 16 CDR SUIT TEMP, COLD.

03 17 29 18 LMP COLD.

03 17 29 19 CDR LIQUID COOLING GARMENT, COLD.

03 17 29 20 LMP COLD.

03 17 29 21 CDR Verify 192 package lanyard not seated.

03 17 29 24 LMP Not seated.

03 17 29 25 CDR FORWARD CABIN RELIEF AND DUMP, AUTO.

03 17 29 28 LMP I'm going to take off that ... - going to try the EVA with ... Let's see, we have to pull ... get it out of the way. It's just too much ...

03 17 29 47 CDR Okay. Housekeeping. Unsnap LMP's helmet stowage bag and stow next to Commander's helmet stowage bag on the floor - Velcro. Unsnap Commander's helmet stowage bag. What time is it, Dick?

03 17 30 02 CMP Stand by, Pete. 09:30:08. Did you get it?

03 17 30 12 LMP Man, we're right on the time line. Yes. Unsnap the other one. Unsnap ...

03 17 30 32 CDR I don't know where the hell that came from.

03 17 30 33 LMP Yes, you do.

03 17 30 39 CDR Okay, they're all stowed. ...

03 17 30 42 LMP ..., Pete.

03 17 30 45 CDR No, no. They come off a PLSS.

03 17 30 47 LMP ...

03 17 30 48 CDR ... dust cover.

03 17 30 50 LMP Okay. Go ahead.

03 17 30 52 CDR Unstow 70-millimeter film bag, top left of right-hand side stowage. Unstow 16-millimeter bag; remove 1 MAG; stow bag top right of left-hand side stowage compartment. Install 16-millimeter magazine CDX, f:ll, 250, 7, six frames per second. Put up snap straps, we've done' right?

03 17 31 16 LMP I don't know ... snap straps ...

03 17 31 20 CDR All right. Well, never mind. Getting back to the unstow 70-millimeter film bag, top left. I don't understand. What are we doing with the 70-millimeter film bag?

03 17 31 36 LMP I don't know. ...

03 17 31 51 CDR f:ll - Easy.

03 17 32 00 LMP ...

03 17 32 02 CDR f:ll.

03 17 32 07 LMP All right.

03 17 32 08 CDR 1/250th at 7 feet. I don't know why it's 7 feet. Six frames a second.

03 17 32 44 LMP All right. ...

03 17 33 09 CDR Stow what bag out of the top right of the left-hand stowage compartment? Huh? I don't understand. Unstow 16-millimeter bag, remove one magazine, and stow bag on the top right of the left-hand side stowage. Over there? Never gone over there, has it? What's this book say? It's full of - baloney.

03 17 33 37 LMP ... right-hand ...

03 17 34 14 LMP ...

03 17 34 45 CDR As pukey a camera as that thing is, it's more trouble than it's worth.

03 17 34 53 LMP ...

03 17 34 58 CDR I put up snap strap. I don't know what the hell you're supposed to do with these two bags.

03 17 35 10 LMP ...

03 17 35 15 CDR What are you going to do with them?

03 17 35 16 LMP ...

03 17 35 17 CDR Forget it. Next thing is COMM activation.

03 17 35 21 LMP ...

03 17 35 22 CDR Yes, right there.

03 17 35 27 LMP ... the way it is, but ... the thing of it is
... - -

03 17 35 36 CDR I don't know what it is; I don't have any idea.

03 17 35 48 CDR Watch it.

03 17 35 50 LMP I'll get it ... yesterday. Kleenex. ...

03 17 36 45 LMP Here's ...

03 17 36 55 LMP What are we going to do with those?

03 17 36 56 CDR ...

03 17 37 46 CDR Sunrise, 89:37. I'll bet it's 87:37.

03 17 37 51 CMP That's exactly right.

03 17 37 53 CDR This book is amazing. There's the Moon. Oh, man, the command module looks pretty. Son of a bitch! Oooh, oooh, oooh. Look at that, I can't believe it.

03 17 38 14 LMP Ooh, ooh, oooh, look.

03 17 38 21 CDR ...?

03 17 38 23 LMP ... See if this ...

03 17 38 24 CDR Yes, and will you - -

03 17 38 35 LMP Would you look at all the water! It was all over, I mean that's water droplets - not only the ones that are on the LM, but the whole outside of the spacecraft's covered with that crap.

03 17 38 35 LMP ...

03 17 38 49 CDR That's it, Al. You haven't got a thing to do until COMM activation at 89 - at 90:30. You got to transfer to LM POWER.

03 17 38 59 LMP ...

03 17 39 01 CDR 90:30, it says.

03 17 39 03 LMP What will we do between now and 90:30?

03 17 39 05 CDR Screw around. I got to go back up in the LM - in the command module and take a leak. I'm going to disconnect from my COMM and come back down here so I can get down here and look out this window and motor around a little bit.

03 17 39 17 LMP ...

03 17 39 18 CDR All right. Let me stick this book right here in this ...

03 17 39 27 LMP ...

03 17 39 29 CDR Huh?

03 17 39 30 LMP ...

03 17 39 32 CDR Yes.

03 17 39 47 CDR How's your tracking exercises?

03 17 39 51 CMP Well, phooey, ... 90 ...

03 17 39 58 CDR Have I got to take a leak! Whoo! Would you hand me my red towel over there?

03 17 40 07 CMP Yes, sir.

03 17 40 16 CDR Hey, Al?

03 17 40 17 LMP Yes.

03 17 40 19 CDR You ought to look out the overhead window there and watch this urine dump.

03 17 40 22 LMP Okay. Let me know when you're going.

03 17 40 34 CDR ... damn son of a bitch! I hate this ...!

03 17 41 46 LMP Let me know when you go.

03 17 41 48 CDR I am right now.

03 17 41 49 LMP Okay.

03 17 41 57 CMP I can't see it out the window. It's going off the back end of it.

03 17 42 01 LMP It's coming right out in all directions. ... slow down?

03 17 42 08 CMP Oh, hell; he's not seeing the good stuff.

03 17 42 13 LMP Right next to it's the waste water dump and ...

03 17 42 17 CDR ..., Al.

03 17 43 08 LMP ... time.

03 17 43 12 CDR Not until 90:30.

03 17 43 53 CDR Man, would you believe I'm hungry again? Would you stick that back in the - here?

03 17 44 09 LMP ...

03 17 44 12 CDR When do we pick up Houston?

03 17 44 17 CMP 90 ... 59.

03 17 44 25 CDR 90:59?

03 17 44 26 CMP What do you mean, 90:59, it's 89. ... pass. ...

03 17 44 40 LMP Okay, hand me the PADs.

03 17 44 43 CDR We're going to slide right out of here - ... get some ...

03 17 44 53 LMP ...

03 17 44 55 CDR Huh?

03 17 44 57 LMP Your OPS is at 6800.

03 17 45 01 CDR ...

03 17 45 36 LMP ...

03 17 45 40 CDR ..., yes; ...

03 17 45 44 LMP That's what it says, huh?

03 17 45 46 CMP ...

03 17 46 05 LMP We have to configure these 70-millimeter cameras
--

03 17 46 09 CDR (Yawn) Is that the Moon over on the other side there? Out that right window?

03 17 46 26 CDR Huh?

03 17 46 27 LMP ...

03 17 46 41 CDR Look at that crater. Jesus Christmas! What crater's that, do you suppose? Look at that crater! Isn't that something?

03 17 46 52 LMP ...

03 17 47 13 LMP Somebody messed around up there.

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03 17 47 25 LMP You can still ... urine out that thing. That's fantastic! We ought to take some pictures of that.

03 17 47 47 CDR I wonder what that thing is next to it?

03 17 47 54 LMP Maybe it's part of a ... or something like that.

03 17 48 39 CDR Look out Al's rendezvous window.

03 17 48 41 CMP ... recognize that.

03 17 48 47 CDR I'm looking at you. You - you ought to come over here and see the - command module.

03 17 48 56 CMP What's it look like?

03 17 48 58 CDR Looks neat-o. Also, the urine dump is still spraying urine out of it, you ought to see it. It's fantastic. Out - the stuff comes out at 180 degrees. Shoots in any direction. Funny.

03 17 49 16 LMP ...

03 17 49 18 CDR Huh?

03 17 49 19 LMP ...

03 17 49 23 CDR ... started.

03 17 49 27 LMP ... - -

03 17 49 32 CDR I'm going to look at the flight plan.

03 17 49 33 LMP I'll tell you one thing ... out of here.

03 17 49 37 CDR Yes.

03 17 49 38 LMP ...

03 17 49 42 CDR Yes. Hey, Dick?

03 17 49 43 CMP Yes.

03 17 49 44 CDR Hand me the flight plan, will you?

03 17 49 45 CMP You want to do - transfer to LM POWER at 90:25?

03 17 49 52 CDR Okay. We don't want any COMM before that - -

03 17 49 53 CMP ...

03 17 49 58 LMP ...

03 17 49 59 CMP ... says transfer to LM POWER - and COMM activation at 90:30.

03 17 50 12 CDR Hey, I'm going to close the hatch ...

03 17 50 18 CMP All right.

03 17 50 37 LMP ... - check the OPS thing.

03 17 50 44 CDR What? What did you say, Al?

03 17 50 49 LMP I'm going to ... your OPS.

03 17 50 50 CDR ...

03 17 50 53 CMP Why don't you secure that dump on that urine ...?

03 17 50 58 CDR Okay. I'll get it. Look, don't forget - to make sure that this is the ..., you got to make sure that ... If the handle's really turned the OPS off, why, you're sunk. Also, make sure that the thing's in there good and tight. If you don't, it'll blow off and run out and you'll be out of OPS.

03 17 51 29 LMP I got 5700 psi in mine.

03 17 51 32 CDR That's good. I rather doubt it. Boy, don't run that test without checking the - hoses.

03 17 51 41 LMP Yes.

03 17 51 42 CDR Don't do it. It'd really bomb me out.

03 17 51 45 LMP Yes. I understand what you're saying.

03 17 52 01 CDR What do you want to do, run a full test?

03 17 52 03 LMP That's what it says.

03 17 52 05 CDR We just testing everything, huh?

03 17 52 07 LMP Yes.

03 17 52 08 CDR Am I going to have to take it off the bracket?

03 17 52 10 LMP That's right.

03 17 52 23 LMP ... let me tell you something.

03 17 52 26 CDR What?

03 17 52 28 LMP They probably got enough gravity to show on the ground that it's 58. It really says 57, but it's calibrated at 58 and ... - -

03 17 52 38 CDR Dick, hold that, will you?

03 17 52 41 LMP Forgot that ... on.

03 17 52 49 LMP ... on -

03 17 52 52 CDR Okay. It's going all right.

03 17 52 54 LMP I got 3.7. Heater looks great - it's not a heater problem. ... Be sure you got ...; lot of ...

03 17 53 10 CDR Mine reads 3.7.

03 17 53 12 LMP Mine's closed now; I'm waiting for a bleeddown. Wait until I set my watch. Okay.

03 17 53 21 CDR Uh-oh, I didn't get any heater test.

03 17 53 23 LMP That heater test is bad news. They've had so many failures with heater tests, it's unbelievable.

03 17 53 31 CDR No. lights.

03 17 53 34 LMP Could you do it with the ... on?

03 17 53 38 CDR Wait a minute. Do I have to have that on?

03 17 53 41 LMP You have to have the O₂ FLOW on, that's right, babe.

03 17 53 45 CDR Oops, that got it, you're right. Heater test's okay.

03 17 53 49 LMP ...

03 17 53 51 CDR Okay, now I got to wait for it to bleed down, right?

03 17 53 54 LMP You sure do. That's the most important part of the test.

03 17 54 01 CDR I'm not supposed to time it, am I?

03 17 54 04 LMP Not really. Just ... bleed down, make sure it's not ... is all.

03 17 54 12 CDR Yes.

03 17 54 16 LMP ... make sure that baby's off. ...

03 17 54 55 LMP ... right on time. ... It's ... right next to it.

03 17 55 14 CDR Say again.

03 17 55 16 LMP It's ... close to it. ...

03 17 55 18 CDR Yes. Come on, bleed down, you mother.

03 17 55 24 LMP Not yet.

03 17 55 27 CDR Huh?

03 17 55 29 LMP ... yet, it takes a long time.

03 17 56 03 CDR I'll hold that for you, Dick.

03 17 56 06 CMP Thank you. Where am I going to put that landmarking track ... this stage? ...

03 17 56 15 LMP ... down.

03 17 56 18 CMP Okay.

03 17 56 19 LMP ...

03 17 56 55 LMP ...

03 17 57 20 CDR Mine just went.

03 17 57 23 LMP Okay. Put that back in ..., hear? ... ready to test yours.

03 17 57 36 CDR As far as I'm concerned, we don't ever have to test that son of a bitch again.

03 17 57 39 LMP I'm with you, babe.

03 17 58 13 CDR Set right here. Right here. Al Bean?

03 17 58 20 LMP Yes.

03 17 58 21 CDR ... through with one OPS.

03 17 58 23 LMP Not yet. ... yet.

03 17 58 24 CDR Okay.

03 17 58 25 LMP ...

03 17 58 33 CDR ...

03 17 58 35 CMP What's that?

03 17 58 37 CDR Al Bean's laying sideways ..., you're laying on your back. I got to do a one ... tunnel to figure out which ... if I go through this way, I'm ... LM (humming).

03 17 58 56 LMP Get in there, you little rascal.

03 17 58 58 CDR Have trouble making it stick?

03 17 59 00 LMP Looks like it's ..., ...

03 17 59 16 CDR What time is it, Dick?

03 17 59 19 CMP About 90 hours. One minute, AOS.

03 17 59 25 CDR You got the right angles on that? Here, give me that flashlight.

03 17 59 28 CMP You got it. Why? Where's it go?

03 17 59 33 CDR I don't know, Al brought it over from the command module - Huh?

03 17 59 37 LMP It goes in my suit.

03 17 59 39 CDR You got yours in?

03 17 59 41 CMP No. Get up this way in order to - -
03 17 59 43 CDR Huh?
03 17 59 44 LMP Flashlight goes in my suit.
03 17 59 46 CDR Oh, his flashlight goes in his suit.
03 17 59 50 CMP Houston, Apollo 12 here.
03 17 59 59 CMP Okay. You want it back? Here.

TIME SKIP

03 18 29 47 CDR And, Houston, Intrepid just went back on CSM
POWER at 90:29:35.
03 18 30 08 CDR Okay. DESCENT O₂, CLOSED.
03 18 30 17 CDR DESCENT H₂O, CLOSED.
03 18 30 23 CDR Stand by for a bang, Dick.
03 18 30 24 CMP Okay.
03 18 30 25 CDR CABIN REPRESS, closed. ... shit out of it.
CB(16): ECS CABIN REPRESS, open; window shades up.
03 18 30 34 LMP ...
03 18 30 36 CDR Except for that flood light. The plug - Pull the
plug.
03 18 30 44 LMP Okay.
03 18 31 04 CDR Okay. I've checked the AOT. Okay. Go ahead,
fold her up, and let's get out. CABIN RELIEF and
DUMP OVERHEAD's already opened. And that's it.
Ahhh - ... this one.
03 18 31 29 CDR You have to stay in until 90:51. Screw it. Let's
go. Now, you can do it.
03 18 31 42 CDR Go ahead. Wait a minute. Oop, oops, oops. You
going to take that with you?
03 18 32 03 LMP Watch Dick, don't bother him.

03 18 32 10 CDR Al, I don't like this strap up here. It's going to get in the way of the hatch.

03 18 32 20 CC Intrepid, Houston.

03 18 32 24 CDR Go ahead, Houston.

03 18 32 27 CC ...

03 18 32 35 CDR It's already out.

03 18 32 53 CDR Hey, Al - see these straps? I'm just going to leave them in here to do that job. They'll do it even better. Okay? We got plenty of those in the command module, don't we?

03 18 33 12 LMP You got me. Here you go. That a boy.

03 18 33 17 CDR Go ahead.

03 18 33 18 LMP I got it.

03 18 33 21 CDR Let me get this stuff out to you.

03 18 33 39 CDR Got the stuff?

03 18 33 40 CMP Yes. I'm just about to.

03 18 33 46 LMP ...

03 18 33 49 CDR Okay. Hey, the other thing, Dick; don't forget to pull these - LM umbilicals.

03 18 34 16 CMP Come on in, Pete.

03 18 34 18 CDR Yes.

03 18 34 19 CMP If you want to.

03 18 34 20 CDR Yes, I'm going to come down there - Huh?

03 18 34 24 CMP Can you wait a while? Well, I'm trying to watch where the hell I'm going.

03 18 34 35 CMP Hey, ALERT button.

03 18 34 36 CDR I got it. I got it.

03 18 35 18 CDR Three five what?

03 18 35 22 CMP 41.

03 18 36 20 CDR Hey, give me your camera with the f-stops for wherever we are.

03 18 36 32 CDR Well, we're at 90:36 right now, and - Hey, Dick, you ... --

03 18 36 39 CMP Just don't - just don't bug me.

03 18 36 41 CDR Yes.

03 18 36 46 CMP I'm going to have to go to three ..., 0.3 here in a minute.

03 18 36 50 CDR Okay.

03 18 37 10 CDR f:8 -

03 18 37 38 CDR 5.6.

03 18 37 41 CMP Take this pen - it's going to be hot.

03 18 37 57 CMP Here, let me --

03 18 38 09 CDR Here you go, Al.

03 18 38 21 CDR I don't know what your clock says down there, Dick, but you're about --

03 18 38 25 CMP 90:40:50 is what I'm looking for.

03 18 38 27 CDR Yes. Well, you're 90:38:21 up here. What's that clock say?

03 18 38 39 CMP 38:20.

03 18 39 20 CDR Holler when you want to go FREE.

03 18 39 24 CMP Okay. I will.

03 18 39 27 CDR Maybe I better let you do it by yourself --

03 18 39 28 CMP Yes --

03 18 39 29 CDR -- ... --

03 18 39 30 CMP -- I think you'd better.

03 18 39 31 CDR -- I'll get in the corner out of your way here.

03 18 39 34 CMP I got it perfect though; it looks real good.

03 18 40 53 CDR You're on your way.

03 18 41 21 CDR Looks as black as - as black can be on this terminator. I never saw anything like it.

03 18 42 59 CDR I wonder how we got roll in here.

03 18 43 52 CMP Pete?

03 18 43 54 CDR Huh?

03 18 43 55 CMP Do you have the flight plan?

03 18 43 56 CDR Right here.

03 18 44 04 CMP Or the 49?

03 18 44 07 CDR Where is the what?

03 18 44 09 CMP Wait for 30 seconds.

03 18 44 11 CDR ... didn't hear you.

03 18 44 15 CMP Hello, Houston. Let me know when you've copied that.

03 18 44 21 CDR What the hell we doing with all that roll in there?

03 18 44 27 CMP Let me know when you've copied the P22.

03 18 44 33 CDR Pretty well, I think

03 18 44 34 CMP It's going to be easy to do.

03 18 44 36 LMP ... really smoking over ...

03 18 44 43 CDR Okay? He's getting Copernicus again, Al; he's rolling back.

03 18 44 47 LMP Okay. ...

03 18 44 55 CMP Houston, I'm going to look at the latitude and longitude from these marks.

03 18 45 02 CDR You want to incorporate them in the state vector, wouldn't you say?

03 18 45 14 CDR 2 o'clock.

03 18 45 28 CDR Going to wind up in what attitude?

03 18 45 32 CMP 291 pitch. On this ball; let it go, just let it go.

03 18 45 38 CDR 291; we're going the wrong way. We're going --

03 18 45 39 LMP Yes --

03 18 45 40 CDR -- all the way around.

03 18 45 42 CMP No. It'll stop and go back. Just let it go.

03 18 45 45 CDR Take the roll out. What do you have?

03 18 45 50 CMP Here we go.

03 18 46 13 CMP Houston, do you copy NOUN 89?

03 18 46 22 CDR ... close. ... supposed to be? ... - ... the program?

03 18 46 47 CDR I didn't get MINIMUM IMPULSE.

03 18 46 50 CMP SPS and throw them all down.

03 18 46 55 CMP Houston, 12 --

TIME SKIP

03 19 11 13 LMP (Laughter) We may not be good, but we can sure claim to be colorful.

03 19 11 17 CDR (Laughter)

03 19 11 23 LMP ... too far ...

03 19 11 29 CDR Roger-Roger.

03 19 11 34 CDR You've checked this, now? VERB 21 NOUN 01, 32 55, ENTER, 16; 16, ENTER?

03 19 11 40 CDR That son of a bitch has gone all over the sky.
It shot way past 291, the other direction.

03 19 11 44 CDR What kind of a deadband you got set?

03 19 11 52 CMP ...

03 19 11 56 CDR Well, you see, we've overshot that. Yaw can go
out to 7-1/2 degrees, can't it? Yes. Huh?

03 19 12 06 CMP ... Is that right?

03 19 12 08 LMP You better smoke this thing over; I don't know
what the freak it's doing.

03 19 12 11 CMP ...

03 19 12 12 LMP It says we're there.

03 19 12 13 CMP What?

03 19 12 14 LMP It says we're there.

03 19 12 17 CMP That's ...

03 19 12 20 CDR Yes. Okay, what are the REACQ angles?

03 19 12 28 LMP This right here.

03 19 13 31 CDR What's on there? Huh?

03 19 12 33 CMP Huh? ...

03 19 12 37 CDR Uplink to CSM - we got an uplink. They gave it
a VERB 66; we got the map update REV 5.

03 19 12 47 CMP That's the switch that's kind of hard on the
space ...

03 19 12 51 CDR Shit, don't cut yourself.

03 19 12 54 CDR Hey, how do we set up this sleep period? Are we
on OMNIs or what?

03 19 12 57 CMP OMNIs for sleep. ...

03 19 13 00 CDR Oh, there it is. HIGH-GAIN ANTENNA TRACK, REACQ;
HIGH-GAIN ANTENNA BEAM, NARROW; S-BAND ANTENNA,

high gain; S-BAND SQUELCH, ENABLE. Got SQUELCH, ENABLE?

- 03 19 13 13 CDR NORMAL LUNAR COMM S-band - ump-pe-dump-pe-dump -
That's done. Okay, we got the top; we did the
E-memory dump; no medication - I'm not worried
about that. Got the fans and all that stuff --
- 03 19 13 25 LMP ...
- 03 19 13 27 CDR Huh?
- 03 19 13 28 LMP ...
- 03 19 13 31 CDR Yes.
- 03 19 13 33 LMP Every night ...
- 03 19 13 36 CDR Every night we've been out?
- 03 19 13 37 LMP What, six pills?
- 03 19 13 38 CDR Yes.
- 03 19 13 39 LMP Yes.
- 03 19 13 40 CDR How many of them?
- 03 19 13 41 LMP One each night. ... we got 506 ...
- 03 19 13 45 CMP ...
- 03 19 13 46 LMP What six of ...?
- 03 19 13 48 CDR I didn't either.
- 03 19 13 49 LMP I told you every blasted time --
- 03 19 13 51 CDR Yes, but I thought you were taking those calm
jobber-do's --
- 03 19 13 54 CMP Oh, no. ...
- 03 19 14 09 CDR Man, these screens sure are getting dirty in a
hurry.
- 03 19 14 16 CDR I'm hungry enough to eat the ass out of a porcu-
pine.

03 19 14 18 LMP So am I.

03 19 14 25 CMP ... Huh?

03 19 14 38 CDR Time to clean the screens. Have we cleaned that lower screen recently?

03 19 14 47 CDR Yurga! Yaah!

03 19 15 22 CDR Well, we'll see how good you were on the gosh-darn fuel when we get our update in a little while.

03 19 15 27 CMP I can tell you; I'm no good.

03 19 15 35 CDR I'll tell you the guy that could really milk this son of a bitch was John Young. I think that's all he did was figure out every thrust before he went.

03 19 15 49 LMP ... matter with Dick Gordon ...

03 19 15 51 CDR Oh, I'm not arguing. I'm just telling you old John --

03 19 15 58 LMP ...

03 19 15 59 CDR Old John really - put the bloopers --

03 19 16 04 LMP ...

03 19 16 05 CDR Well, you want to leave these docking probes, straps, and all this stuff out, don't you?

03 19 16 09 LMP Might as well. There's the stuff ...

03 19 16 23 CDR What day is today? Third day, or fourth day, or what?

03 19 16 38 CDR Day 4, meal C, is that right? We've been up here 4 days? Hand me your scissors, will you, Dick? Hey, it looks like I get - No, that looks like Dick gets a spaghetti dinner. No, I get something else. Hey, Dick, let me borrow your scissors, will you?

03 19 17 26 LMP ... box of towels.

03 19 17 31 CDR I ain't going to reach in - I think what the trouble is, most of the guys have been using

Kleenexes; I like the towels better and I'd have gone for one of those Kleenex boxes full of towels myself. Huh?

- 03 19 17 48 CMP The trouble with you is you got to have ...
- 03 19 17 53 LMP Make up your mind. (Singing, whistling)
- 03 19 17 58 SC (Singing)
- 03 19 18 01 CDR How in the hell did I do that? Did I cut that bag?
- 03 19 18 07 CMP That's yours.
- 03 19 18 16 CDR And you're with me. Al, stick this over on your shelf. Here. Yes, I'll - I'll finish ... in a minute if you'll keep it - trapped.
- 03 19 18 52 LMP Hold it off.
- 03 19 19 13 CDR You get spaghetti again? Did I get the wrong food or something?
- 03 19 19 21 CMP Hey, ... - -
- 03 19 19 22 CDR Yes. What's - what's mine supposed to be?
- 03 19 19 30 CMP You're supposed to ... spaghetti.
- 03 19 19 34 CDR I get spaghetti again? It doesn't look like it.
- 03 19 19 37 CMP ...
- 03 19 19 39 CDR Yes, but look; that's not the right meal.
- 03 19 19 42 CMP Day 4, meal C - where I am.
- 03 19 19 48 CDR Spaghetti with meat, if that's spaghetti - it doesn't look like spaghetti. Oh, yes, there it is.
- 03 19 19 55 CDR I been waiting for days for this spaghett. Better be good.
- 03 19 20 01 CMP You can have mine.
- 03 19 20 02 CDR Why, you didn't like it?

03 19 20 04 CMP It's okay, but ...

03 19 20 06 CDR You're a spaghetti expert in your own right, but the kind of spaghetti that you like, I don't really care for, I don't think.

03 19 20 12 CMP I like it spicy. The kind of spaghetti we like, my mother used to make.

03 19 20 20 CDR Now what's flowing hot?

03 19 20 23 LMP Did I leave the pressure on again?

03 19 20 26 CDR Son of a bitch. We're sure - shooting the goddamn oxygen, we better watch it.

03 19 21 33 CMP ...

03 19 21 44 CDR Huh?

03 19 21 47 CMP ...

03 19 21 49 CDR Boy, you can say that again. Grape punch - cocoa - I'd like cocoa before I go to bed tonight; I got to make sure I get a good night's sleep. What's that, tomato soup or something? Banana pudding - Beef - how come I got beef stew and spa - and spaghetti too?

03 19 22 19 CMP ...

03 19 22 20 CDR Man, they just loaded me down with it.

03 19 22 23 CMP ...

03 19 22 24 CDR Eighty-nine meals!

03 19 22 41 CMP ...?

03 19 22 43 CDR No. That's what bothers me.

03 19 22 57 CDR Blow your mind, that song's a terrible song. That's in the top 10? That's - I hate that kind of goddamn music.

03 19 23 06 CMP Yes. ...

03 19 23 25 LMP ...

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03 19 23 29 CDR I got to do the whole thing later, Al; I'll get them.

03 19 23 31 LMP All right.

03 19 24 15 LMP Well, hello there. Where in the hell did you come from?

03 19 24 17 CDR Is that mine again?

03 19 24 19 CDR Oh, he's - He's a nasty little booger; he keeps flipping out of there.

03 19 25 10 LMP Can't you get yours on?

03 19 25 12 CDR Well, if I can ever get the motherfucker open.

03 19 25 17 LMP ... Here we go.

03 19 25 21 CDR Oh, you little bastard - come on.

03 19 25 37 CDR Oh, this makes me mad.

03 19 25 53 CDR That landmark tracking worked out real easy, huh, Richard?

03 19 25 57 CMP Yes. ...

03 19 25 59 CDR Good show. Hey, I figure this thing puts out a half an ounce, don't you?

03 19 26 06 CMP Sometimes more, sometimes less.

03 19 26 20 CMP ...

03 19 26 22 CDR Eight and one-half.

03 19 26 29 CDR Boy, I want to get out of the LM and get with it; I want to make sure we get to bed on time.

03 19 26 37 CDR Huh?

03 19 26 48 CMP ...

03 19 26 49 CDR Huh?

03 19 26 51 CMP ...

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03 19 27 35 CMP What are you doing?

03 19 27 37 CDR Huh?

03 19 27 39 CMP ...?

03 19 28 14 CDR Can't you do that for me?

03 19 28 06 LMP Huh?

03 19 28 17 CDR (Laughter)

03 19 28 29 CMP ...

03 19 28 31 CDR Just 1 second; I will be.

03 19 28 35 CDR Oh, you stupid son of a bitch! God damn, these things are really about to piss me off! I get that cocksucker open, and the son of a bitch shuts up again, and I'm - I really spend more freaking time trying to put goddamn water bags together than anything else.

03 19 29 29 CDR Okay, Richard; that one's all yours.

03 19 29 49 CDR If you're not going to use that, I'll use the cold-water side here while you --

MUSIC (Wedding Bell Blues by the Fifth Dimension)

03 19 31 57 CMP ...

03 19 32 29 CDR Son of a bitch. (Laughter) To hell with this. I didn't want to ...; I was trying to let the air out of the goddamn bag (laughter).

03 19 33 14 CDR What? Oh, white coveralls. No, you got this one.

03 19 33 29 CDR Really pisses me off.

03 19 33 53 CDR God damn it! This bag is really bad.

03 19 34 40 CDR Hey, I'm in trouble with this bag, I'm not kidding you; this thing is really bad news.

03 19 35 12 CDR Hey, Al, would you stick that in the TSB, please?

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03 19 36 30 CDR Sun's coming up.

03 19 38 37 CDR Why? All right.

03 19 38 56 LMP ...

03 19 39 05 LMP ...

03 19 39 09 CDR I got to secure it before we go to sleep, anyhow, I imagine. Bat C charging?

03 19 39 16 LMP ...

03 19 39 53 CDR Now, I've got to cope with this thing again. This thing is really bad.

03 19 40 57 CDR Look at that. Got so goddamn much air in it, you know, it's ... I can't do anything with this - freaking bag.

03 19 41 11 CDR ... - dehydrated foods.

03 19 41 26 CDR Huh?

03 19 41 28 LMP Get a load of that!

03 19 41 29 CDR Get a load of what?

03 19 41 30 LMP ...

03 19 41 33 CDR Where?

03 19 41 35 CDR Ooh - what the hell is he looking at, Dick?

03 19 41 41 CDR Yes. Oh, gooey, gooey, gooey. That's what I first saw when we started burning this morning.

03 19 42 01 CDR Hey, call up a VERB 82, ... Here you are. Look at that crater.

03 19 42 16 CDR I'll get it, I'll get it. Oh (laughter).

03 19 42 31 CDR 65.9 by 65.2.

03 19 43 05 CDR What we need is some more music.

03 19 43 39 CDR We've got to get the spacecraft shipshape here - in a little while.

03 19 43 52 CDR Al and I are going to break out our LCGs and stuff for in the morning. How about another tape?

03 19 44 04 CMP I got it.

03 19 44 15 SC ...

03 19 44 18 CDR You want this?

03 19 44 24 CDR A bag of bananas to go with my gumbo.

03 19 44 28 CMP ... There you go.

03 19 44 33 CDR All right.

03 19 44 34 CMP ...

03 19 44 37 CDR You didn't order one. I think you said something; I remember back there not liking one of them, what was it, ham and potatoes?

03 19 45 20 CMP ...

03 19 45 23 LMP ...

03 19 45 24 CDR I wouldn't - I wouldn't whistle around the block for it. Especially after I had so much trouble with that bag.

03 19 45 45 CDR Ever seen a rat holer before?

03 19 46 01 CDR Huh?

03 19 46 38 CDR Hell, it's - How come you got extra fruit cocktail? You're the guy that ordered them for every meal (laughter).

03 19 46 55 CDR Okay, ... bad ... on purpose. You run out ...

03 19 46 59 LMP Would you?

03 19 47 04 CDR Okay.

03 19 47 07 LMP This is a hell of a ...

03 19 47 12 LMP ...

03 19 47 18 CDR It didn't fit. ...

03 19 47 28 CDR No. No, all I'm interested in is getting the job done.

03 19 48 01 CDR Oh, shit! It's getting this gigantic water bubble around it again.

03 19 48 20 CMP There's no spaghetti in here.

03 19 48 22 CDR Huh?

03 19 48 24 CMP ...

03 19 50 11 CMP If I ever come out here again, I'm going to ...

03 19 50 14 CDR What? What?

03 19 50 16 CMP ... warm ...

03 19 50 19 CDR That's right.

03 19 50 22 LMP What a ...

03 19 50 27 LMP ...

03 19 50 35 CDR I wonder what crater that is?

03 19 50 47 CDR Is that the side you can see from ... From us? Earth? No, I don't think so.

03 19 50 55 CDR Earth can't see this crater, can they? They don't have us in ACQ -

03 19 51 06 CDR I'd like to find that damn crater on the map; that's an interesting son of a bitch. The one that's got that - couple of - rift zones running through it, with vent tubes in it.

03 19 51 27 CDR We ought to be getting ACQ here in just a second.

03 19 51 42 CMP ...

03 19 51 44 CDR Huh?

03 19 51 49 CDR What did you say?

03 19 51 52 CMP ...

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03 19 51 53 CDR Oh.

03 19 51 54 CMP Almost sunrise.

03 19 52 15 LMP ...

03 19 52 20 CDR You know, this side of the Moon here, I think, is really pretty. The other side's ugly.

03 19 52 27 CMP What?

03 19 52 28 CDR Whose orange?

03 19 52 29 CMP ... mine.

03 19 52 30 CDR Whose orange?

03 19 52 31 LMP Mine. ...

03 19 52 36 CDR There's another one of those. Look at - look at that vent tube, rift zone thing.

03 19 52 47 CMP ...

03 19 52 48 CDR Huh?

03 19 52 49 CMP What do you ...

03 19 52 50 CDR That's what I mean, that's what I --

03 19 52 52 CMP ...

03 19 52 53 CDR Yes, that's what I'm talking about.

03 19 53 05 CDR This yours, Al?

03 19 53 08 LMP That orange?

03 19 53 09 CDR Yes. Where do you want it?

03 19 53 13 LMP Oh - ... would be okay.

03 19 53 58 CDR What happened there? We haven't acquired.

03 19 54 10 CDR Oh, 57. I'll tell you, this side of the Moon is really pretty. Look at those tracks down there, just like animule tracks.

03 19 54 24 LMP ...

03 19 54 39 CDR What do you suppose they are?

03 19 54 58 CDR They're nice deep rifts; that's what the hell they are. Boy, there's an interesting crater right there, look at that one.

03 19 55 15 LMP ... - -

03 19 55 18 CDR Yes.

03 19 55 19 LMP - - ...

03 19 57 56 CDR There we are. This thing just locks up.

03 19 58 09 CDR Roger, Houston. 12, out.

03 19 58 21 CDR Get it all packed? Here.

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DAY 5

04 04 58 30 CDR ... is off. Get the - I'm going to leave them just the way they are until we get all the way through the EVA, until I get back up here and then I want to take them off.

04 04 59 04 CDR For some reason, we're breaking lock. Have we gone around the Moon?

04 04 59 08 LMP You'll know when we get there.

04 04 59 12 CDR Do you read me, Houston?

04 04 59 21 CMP ... the ascent stage from the handover. What do you want, Al?

04 04 59 27 LMP ...

04 04 59 28 CDR Hello, Houston; Apollo 12.

04 04 59 31 CMP No one in there to - Shit, feels like there's nothing in there.

04 04 59 43 CDR Why would we lose the signal on the high gain?

04 04 59 54 CDR What OMNI would that be, Dick? B? Don't touch - don't touch these.

04 05 00 11 CMP Try ..., try ...

04 05 00 19 CDR Yes. Okay, Houston, I'm on OMNI B. How's that?

04 05 00 27 CC ...

04 05 00 39 CDR Okay, what - what the problem is, is I - for some reason, it's making me break out. It looks like I've got poison ivy under those things and they are weeping - plasma, or whatever you weep; and the one I moved is the one on the top of my chest, and that's all broken out up there. Now, I don't want to take the rest of them off because I'm afraid of what I'm going to find underneath. So what I propose to do is continue the way they are and when we get done the EVAs down there, I want to get rid of them; they're driving me buggy.

04 05 01 33 CDR Roger. Okay, I've already moved that one, and - my skin's in pretty bad shape underneath it. It's still weeping whatever you weep, plasma, I guess; and I don't want to move the other ones.

04 05 01 52 CC ...

04 05 01 57 CDR That's affirmative.

04 05 02 08 CDR I think we're getting ready to lose you here, Houston. We'll see you on the other side at 101:49.

04 05 02 20 CMP Go back to HIGH GAIN.

04 05 02 54 LMP ...

04 05 03 00 CDR Another thing I was thinking about doing - Taping this goddamned thing's going to be -

04 05 03 08 CMP Huh?

04 05 03 13 CDR It'll have been on for 32, 34 hours before he was --

04 05 03 17 CC Apollo 12, we'll see you on the other side.

04 05 03 19 CDR Roger-Roger.

04 05 03 23 LMP ...

04 05 03 27 CMP Is that a promise?

04 05 03 29 CDR (Laughter) Looks good. We're on the other side.

04 05 03 36 LMP ...?

04 05 03 38 CDR We got our O₂ fuel cell purge, waste water dump, clean the spacecraft; we got 1 hour.

04 05 03 47 LMP ...

04 05 03 52 CDR Al, we actually have 1-1/2 hours to do all that in and then we're supposed to start donning our LCGs, so I think we can probably get ahead of the game right there.

04 05 04 08 CDR Hey, I got to bandage this son of a bitch. Are there any bandages in there? Look at that freaker. It usually doesn't --

04 05 04 16 LMP Maybe that antibiotic isn't doing any good.

04 05 04 23 LMP We've got lots of bandages. ... antibiotics just bombed it out.

04 05 04 34 CDR I would have bombed it out; it's just --

04 05 04 35 LMP ... eye drops ...

04 05 04 37 CMP ... , yes. Is there ... in that medical kit?

04 05 04 43 CDR Yes, there's ... but the only trouble is ...

04 05 04 48 CMP What? Isn't that thing going here someplace?

04 05 04 50 CDR I - I didn't look that carefully.

04 05 04 52 LMP ...? ...

04 05 04 57 CMP ...

04 05 04 58 LMP I don't know.

04 05 05 00 CMP Right - right there. Wherever the hell that is.

04 05 05 05 LMP ... cleaned ... home - home.

04 05 05 08 CDR Where was that clean yesterday?

04 05 05 10 LMP Oh, those little ones, but the big ones --

04 05 05 12 CMP ... cleaned ...

04 05 05 14 LMP Filthy. ... - Oh, yes. ... I've got some over here.

04 05 05 24 CMP What's that, Al?

04 05 05 25 LMP ... I'm taking out of your MED kit two of these nasal sprays, and I'm taking the nasal emollient, if it's okay.

04 05 05 32 CMP Why don't you take one eye drop?

04 05 05 33 CDR Wait a minute; we got that in the MED kit in the - -

04 05 05 35 LMP No, we don't; I checked it.

04 05 05 36 CDR What's in it?

04 05 05 37 LMP The only thing in a bottle is eye drops.

04 05 05 39 CMP Isn't there a medical kit in the LM?

04 05 05 41 CDR Yes, there's nothing in there but eye drops.

04 05 05 43 LMP We've got eye drops and some of these things ..., but it doesn't have any nasal spray.

04 05 05 48 CDR This kit isn't medication; that's just - -

04 05 06 10 LMP ... and ask him for it.

04 05 06 13 CDR I tell you, the other ones are just as - -

04 05 06 14 LMP Give me a piece of tape.

04 05 06 15 CDR - - the same way, but not quite as bad - not at the moment.

04 05 06 17 CMP ..., Pete.

04 05 06 19 CDR I got it; wait a minute; it's right here. Here.

04 05 06 52 CMP You guys leave anything for me? Huh?

04 05 07 12 CDR Hey, Dick?

04 05 07 13 CMP Yes.

04 05 07 14 CDR Will you stick that in the TSB down there?

04 05 07 20 CMP Let me get this screw off.

04 05 07 59 CDR Hey, one more thing for the TSB. I know, this ought to go in the waste disposal.

04 05 08 11 CMP Let me get this ... out of your way here.

04 05 08 18 CDR You could clean those clothes out right now and put them away. I think that's what I'll do.

04 05 08 23 CMP Huh?

04 05 08 24 LMP ...

04 05 08 31 CDR We'd be better off putting them in where the - where the LCGs are.

04 05 08 34 LMP ...

04 05 08 39 CDR I guess you're right; we ought to just try ...

04 05 08 44 CDR You've got to shit, huh? That figures (laughter).

04 05 08 49 LMP ...

04 05 09 03 CDR I wish I could shit; I'd feel a lot better about it. I don't - have the slightest inclination, but I just know what's going to happen. It's going to be the first shit on the lunar surface.

04 05 09 12 LMP ...

04 05 09 18 CDR Thank you.

04 05 09 33 CMP Okay, I'm up on the time, I guess. See what else we've forgotten.

04 05 10 15 CDR Exactly what it looks like underneath here is poison ivy. That's the best way to describe it.

04 05 10 19 CMP Looks bad.

04 05 10 21 CDR Yes, it looks like a bad case of poison ivy. I hate to look under the rest of them.

04 05 11 06 CDR We ought to get as much done as we can in the next hour because as soon as we come back out from behind the Moon, it's going to be yak, yak, yak, yak.

04 05 11 13 LMP That's right; we're going to have to remember to --

04 05 11 14 CDR Oh, they got all kinds of PADs as soon as we get fired up here.

04 05 11 23 CMP Let's get that waste water dump going.

04 05 11 25 CDR Okay, I'm watching.

04 05 11 27 CMP That's good then, I'll get that going; let's - -

04 05 11 30 CDR Do we have an O₂ and H₂ purge or just O₂?

04 05 11 32 CMP Just O₂.

04 05 11 33 LMP Why don't I do it right now?

04 05 11 35 CDR All right, that's what I want. Here you go.

04 05 11 43 LMP Here comes fuel cell 1 - O₂. I've already started watching the waste water, too.

04 05 11 54 CDR All right. Close on the potable - waste down 50.

04 05 11 59 LMP Good. There you go.

04 05 12 04 CDR Get all that good stuff done.

04 05 12 34 CDR Time for my vitamin pill this morning. Here are your vitamin pills. Boy, I'd swear, if I didn't know better, that that's exactly what I had was poison ivy.

04 05 12 51 LMP That vitamin-pill supply is getting low - -

04 05 12 53 CDR I've got all kinds of drugs; give them to you.

04 05 12 56 LMP Why don't you give me some and I can stick them in there. I've only got three, and I'll have a hell of a time fighting these blue jobs here. No.

04 05 13 07 CMP Hey, that's a bunch of ... there.

04 05 13 17 CDR I need a - I need a sack. ... Wait a minute. ... going to eat them all now, make you ...

04 05 13 50 CDR Want a vitamin pill, Dick?

04 05 13 51 CMP What?

04 05 13 52 CDR A vitamin pill?

04 05 13 55 CMP I guess so.

04 05 14 03 CDR I'm trying to play doctor, sort of.

04 05 14 14 CDR Here you go. You want a pill?

04 05 14 20 LMP Yes, I'll take one with some water, in a minute.

04 05 14 51 CDR I ..., you're liable to lose your ...

04 05 14 57 LMP Really?

04 05 14 59 CDR Go ahead and take it.

04 05 15 00 LMP No, I'll go ahead and wait until Gordon takes it. Wait a minute.

04 05 15 06 CDR O₂ FLOW HIGH. Where the hell is it? Oh, here it is, okay. Where are you?

04 05 15 39 CDR What's the waste water?

04 05 15 42 CMP It's okay. ...

04 05 15 56 CDR Okay, close her up.

04 05 15 57 LMP One for you and one for me.

04 05 15 59 CDR Okay, good show. Get this thing started now. Fuel cell 2 - 2, O₂ - and there's that one.

04 05 16 50 LMP About every 10 minutes, that baby will be so clear, I won't - -

04 05 16 54 CDR Be careful with that - should be on ... once in about 8 hours.

04 05 16 57 LMP Really?

04 05 16 58 CDR Yes, and it can make you goof - not goofy, but it can make you light-headed. Don't take too much of it.

04 05 17 04 LMP I don't need to be light-headed.

04 05 17 11 CDR Got it? In the bag, huh?

04 05 17 13 CMP In the bag.

04 05 17 15 CDR Good show. Okay, our waste water's coming down. Going to have you stop your crapping and shut off the waste water (cough).

04 05 17 27 LMP What am I going to run it to?

04 05 17 29 CDR Ten.

04 05 17 58 CDR How busy are you, Dick? How busy are you?

04 05 18 02 CMP ...

04 05 18 04 CDR Huh?

04 05 18 05 CMP ...

04 05 18 17 CDR Okay, how about - how about - here - here. Waste water -

04 05 18 24 LMP Okay, fuel cell 2 looks good.

04 05 18 28 CDR Potable, on; dump, off.

04 05 18 30 LMP Try fuel cell 3.

04 05 18 53 CMP Where are ...?

04 05 18 54 CDR Right here, Dick.

04 05 19 08 CDR Okay, the next thing we've got to do - cycle these fans. You ready? 1 - -

04 05 19 14 LMP Yes.

04 05 19 17 CDR - - 2 - 3 - 4.

04 05 19 24 LMP You're ...

04 05 19 30 CDR Is the pisser turned on over there, Dick?

04 05 19 33 CMP Yes, ...

04 05 19 35 CDR Turn it off. Okay, you've closed off the waste water dump, is that right? Dick Gordon?

04 05 19 47 CMP Huh?

04 05 19 48 CDR Waste water's off, huh?

04 05 19 49 CMP Waste water's off.

04 05 19 50 CDR Okay.

04 05 20 40 LMP Just a minute. Valve's closed. Fuel cells 3, 2,
1 all look good.

04 05 20 56 CDR Okay, the only thing left to clean up on this
page - get these fans off.

04 05 21 01 LMP Got ..., Pete. Still got to let me have half a
minute more to ...

04 05 21 05 CDR All right.

04 05 21 15 LMP BAT A needs a charge.

04 05 21 20 CDR I'm sure that we aren't supposed to do that some-
place in here.

04 05 21 24 LMP We are, sure needs it. How come our damned SPS
is warm?

04 05 21 33 CMP ... warm.

04 05 21 34 LMP The fuel TEMP on the service module propellant
tank, 90 is the limit to 65 to 75.

04 05 21 44 CDR Well, it's been 75 up those - -

04 05 21 46 CMP ...

04 05 21 55 LMP We probably ought to ... them - because it's above
the normal limit.

04 05 21 58 CMP Sure is.

04 05 22 01 LMP Only, I don't know how you get hot fuel.

04 05 22 04 CDR That's really just the line TEMP, by the way.

04 05 22 06 LMP Yes.

04 05 22 07 CMP You're right; that's the line TEMP and that's
probably exactly why.

04 05 22 16 LMP Okay, fans off. 1, 2, 3, 4.

04 05 22 37 LMP Get my freaking ...; it's a problem to work back
down there.

- 04 05 22 41 CMP Sure ... to working right now.
- 04 05 22 43 LMP Can't do nothing. I'm sure that piece didn't bother Pete before - -
- 04 05 22 49 CDR It's never bothered me before, Al. Christ, I've worn it for 8 days on Gemini, 3 days on Gemini, wore it in chambers; I never had any problem.
- 04 05 22 57 LMP Yes?
- 04 05 22 58 CDR There's something funny.
- 04 05 23 04 LMP You probably had a bad ..., ... or something like that.
- 04 05 23 07 CDR That's true. That being the case, somebody else ought to be feeling bad, too.
- 04 05 23 20 LMP I wish we hadn't looked at ...
- 04 05 23 31 LMP PRIM, PRIM, HIGH, VOICE, PCM, RANGING. OFF, OFF, DATA, NORM, B, HIGH GAIN.
- 04 05 23 50 CDR Break out the food.
- 04 05 24 02 LMP Okay, we're all set. I want to make sure I'm not switching to anything else yet. Should be we're running happily along.
- 04 05 24 31 LMP Give me - What's this shit doing here? ... the place up.
- 04 05 24 40 CDR We're shipshape. Get my freaking towel out of the way.
- 04 05 25 02 CMP Where are we supposed to do - keep the towels?
- 04 05 25 05 CDR Go ahead and put them in that - put them in that waste bag. Those babies go to the lunar surface, as far as I'm concerned.
- 04 05 25 10 LMP That's where I've been putting mine.
- 04 05 25 11 CMP In the LM?

04 05 25 12 CDR Nobody said anything to me about used towels, though. I'll just say, "What? No, I didn't - nobody said anything about that."

04 05 25 20 LMP Doesn't sound too bad anyway - -

04 05 25 23 CMP Okay. ... towels - dirty ones.

04 05 25 29 LMP ... keep a clean towel.

04 05 25 31 CMP Got rid of them.

04 05 25 32 LMP The dirty one going into the LMP's clean -
(Laughter)

04 05 25 35 CDR You ought to really smoke this baby over from one end to the other, when we get - the food's no problem, but anything else is, you know, get rid of it. Like you say, if we could get rid of those turds, we'd have it made.

04 05 25 51 CDR Day 5, meal A.

04 05 25 58 LMP Okay, that's done, baby. Don LCG at 102:30. I think I'll start that about 102.

04 05 26 10 CDR Huh? Where - where are you?

04 05 26 15 LMP ... at me.

04 05 26 17 CDR Coming at you. Right here.

04 05 26 21 LMP Let me see if I - Don LCG. Well, I can don it here; I got ... time. I don't get in - and the thing of it is, I got to be out of the way when you're donning yours.

04 05 26 35 CDR Look, I'll help you get into your whole rig and then you press on.

04 05 26 39 LMP Okay.

04 05 26 41 CDR Hey, how soon do you fire up the batteries in that bastard; right away though, don't you?

04 05 26 46 LMP We got to do that on time.

04 05 26 48 CDR LM POWER, 104.

04 05 26 52 LMP Straight ahead for 3 hours and 40 minutes from here.

04 05 27 00 CMP ...?

04 05 27 02 CDR Yes.

04 05 27 13 CDR Hey, would you stick - would you stick - that in the waste disposal unit, over there?

04 05 27 20 LMP Get her in the ...

04 05 27 32 CDR We got aspirin over in that other son of a bitch?

04 05 27 35 LMP Yes.

04 05 27 37 CDR Okay. As long as we got aspirin, that's all I wanted to know. I have a feeling that I may need it, over there - getting tired.

04 05 28 24 CDR Got your ... for you.

04 05 28 25 LMP Oh.

04 05 28 27 CDR That thing's in a separate bin from anything else. Here, let me just snap it on something, or - -

04 05 28 32 LMP Why don't you snap it right there? That's where I figured it'd go.

04 05 28 37 CDR Mine's in my helmet bag, so I didn't have to worry about it.

04 05 29 00 LMP Going to have some music to cool it. I'm about as jumpy as I can be this morning.

04 05 29 06 CDR You noticed!

04 05 29 07 LMP Huh? Jumpier than I was on launch day.

04 05 29 14 CDR I kind of have the same feeling; it's a bigger day.

04 05 29 17 LMP It is. You've got more things under your command today, ... Launch day, you're just - kind of along for the ride. Be safe; stick with that freaking list - ... Stick to the list and be careful you don't throw the wrong switch. Don't get in a hurry.

04 05 29 46 LMP Don't get too fancy.

04 05 29 47 CDR No fancy shit; you're right.

04 05 30 04 LMP Damn! Do I have a lot of breakfast here. ...

04 05 30 15 LMP See how my pulse is doing.

04 05 30 31 CDR Let me have the gun, Richard, if you're done with it.

04 05 30 39 CMP I'm slow, Pete.

04 05 30 40 LMP It's a minute above normal.

04 05 30 43 CDR What's normal?

04 05 30 45 LMP Seventeen - in a 15-second period. That's what I've been running; I've been checking myself. I used to multiply it out and then I said to hell with it.

04 05 30 59 CMP Roger. We've got a 15-second turnover.

04 05 31 05 LMP Shit.

04 05 31 06 CDR What happened?

04 05 31 07 LMP Nothing.

04 05 31 10 CMP It isn't easy. Watch what you're doing.

04 05 31 16 CDR You haven't rewound it. Boy, I tell you; this shit drives me totally insane.

04 05 31 37 CMP Parts falling off of our spacecraft like - loose ...

04 05 31 54 CDR God damn, damn! I'll tell you; I hate these mother-freakers with a passion! God damn! Oh, shit!

- 04 05 32 08 LMP What happened?
- 04 05 32 09 CDR Oh, I just let the parts loose. It makes me sloppy and I hate to be sloppy in space! Right?
- 04 05 32 10 LMP Right - -
- 04 05 32 17 CDR Got to be neat!
- 04 05 32 18 LMP - - if you say so. We have got a pretty neat spaceship. The only bag of worms we're leaving Dick Gordon will be that big bag of - stuff here. Fortunately, most of this food is - done.
- 04 05 32 35 CDR Dick can handle it.
- 04 05 32 45 LMP Dick's a little jumpy this morning, too; I've been watching him in action. I can tell by your arm movement.
- 04 05 32 58 LMP There you go - up, up. Somebody's - gotten to that little ...
- 04 05 33 05 CDR I tell you, I hate to see that thing ...
- 04 05 33 16 CDR I really do get annoyed at those end pieces though; they just drive me absolutely ape! Now, for your next one, did you want to shake the bag? Look at that. Is that a drop of water on the end of that bastard?
- 04 05 33 37 CDR (Humming)
- 04 05 33 42 LMP It'll be good to get down on the lunar surface and do some physical work. You know that?
- 04 05 33 48 CDR Speak for yourself; I'm a lazy son of a bitch.
- 04 05 33 51 LMP So am I, but ... - I'm just ready enough to get down there and -
- 04 05 33 58 CDR You can't hardly sock it up (laughter).
- 04 05 34 02 LMP Too soft?
- 04 05 34 03 CDR Yes, and it's ... like everything. Hey, we got to decide what we going to do with that plaque.

04 05 34 15 LMP ... put it up ... going to put it up and the other one steps back and reads ...

04 05 34 24 CDR You're going to put it up; how am I going to know when you're finished?

04 05 34 27 LMP I'll tell you.

04 05 34 28 CDR That looks pretty good or something like that?

04 05 34 29 LMP Yes. Okay, then you step back, and I'll step right beside you.

04 05 34 30 CDR Okay.

04 05 34 32 LMP And then I'll go out and grab that thing some way so the TV camera can see it.

04 05 34 37 CDR Yes.

04 05 34 38 LMP And you move it around so they can see the side view of it - -

04 05 34 40 CDR Well, what I really ought to do is, you ought to put the TV camera on the - where you're going to drive the pole in, and I ought to stand off the TV - and get it all raised; you can walk in and ... it all.

04 05 34 56 LMP Not a bad idea.

04 05 34 58 CDR Yes. That's what we'll do.

04 05 34 59 LMP I'll put in the pole, and I'll step back, so that - -

04 05 35 02 CDR Yes.

04 05 35 03 LMP - - so that - Here's the TV; here's the flag - I'll step back here, and you can put it - step over here, then you go around, and we salute it. ...

04 05 35 18 CDR I don't think it's ...

04 05 35 31 LMP Like that?

04 05 35 32 CDR Yes, that's right. They'll like that.

04 05 35 35 LMP ...
04 05 35 37 CDR (Laughter) Here it is.
04 05 35 43 LMP You can just read it off your cuff, man.
04 05 36 02 CDR Here it is. Oh, it's an ugly mother.
04 05 36 17 LMP It sure is.
04 05 37 01 CDR (Singing) Oo-oo-oo. Oo-oo-oo, yeah! Yeah!
Yeah! Yeah! Yeah!
04 05 37 19 LMP ...
04 05 37 22 CDR This is coal black.
04 05 37 52 CDR Hey, what did I do with my bacon?
04 05 37 53 LMP I have one of them.
04 05 37 55 CDR What happened to my bacon? I guess it got away.
04 05 38 00 CMP Whoops! (Laughter)
04 05 38 03 LMP Here you are, Dick. Thank you.
04 05 38 07 CDR You can have some of mine, ...
04 05 38 28 CDR I just hope we find the old Snowman! Then, I
hope we find a place to land; then, I hope I can
set it down all right!
04 05 38 39 LMP If you can set it down, you'll find a place to
land. Don't you comment too long.
04 05 39 03 CMP Don't let it get low.
04 05 39 08 LMP Don't let us get low. That worries me more than
anything. I think we'll see the crater; I just
hope we - hope we --
04 05 39 17 CDR I copy about 5 degrees' Sun angle, right there,
don't I? Right back there's going to be about
5 degrees' Sun angle. God damn, it's going to
stand out. Those shadows are going to be sharp
as hell.

- 04 05 39 32 LMP They are - a lot more sharper than the simulator, aren't they?
- 04 05 39 35 CDR We could ... wherever that is, you know.
- 04 05 39 39 LMP The trouble is, there's a lot of other ... - yes, I think you're going to find it. Don't - don't do that. You're liable to get amongst them, again. That worries me a little bit.
- 04 05 39 55 CDR We'll probably be better off targeted right to the crater.
- 04 05 39 58 LMP Huh?
- 04 05 39 59 CDR Probably better off targeted right to the crater.
- 04 05 40 01 LMP That's right.
- 04 05 40 02 CDR If we got any error, we're going to be long, anyhow.
- 04 05 40 06 LMP If it's good and low, we can really burn it up and just float along.
- 04 05 40 14 CDR You know, we've got one hell of an inclination to the Sun; will you look at that - inclination angle of those shadows?
- 04 05 40 21 LMP Yes. Beautiful. Going to make it nice to see in.
- 04 05 40 24 CDR I hope so. I wish I could see what I'm - We're 60 miles; how big do you suppose those craters are down there? How many meters across the goddamn thing? It must be kilometers.
- 04 05 40 36 LMP Well, we ought to be able to see ours, just past this ... Let's see, our Sun time ...
- 04 05 41 04 LMP If we pull this off, we could be slicker than owlshit.
- 04 05 41 23 CDR It's driving me buggy; I just don't know what I'm going to see when I pitch over. Take a look and I'm going to say, "Ahhhhh! There it is!" I'm going to say, "Oh, freeze it!" I don't recognize nothing (laughter). Then, I'm in deep yogurt. Then, if I don't recognize anything, I'm

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just going to let it keep going. That's the best I can do.

04 05 41 42 CMP That's right.

04 05 41 43 LMP If you don't recognize a thing, I'll look - Just tell me - I'll look out my side - -

04 05 41 46 CDR Yes, yes.

04 05 41 47 LMP -- and you look at the computer for a few seconds, and let me see if I see anything out there. What altitude now? 60 miles and it's pretty damn high. And you'll ...

04 05 41 57 CDR That's that - that's that crater vent tube.

04 05 42 00 LMP Isn't that fantastic!

04 05 42 01 CMP Hey, and that's going to be in the dark - not too long after -

04 05 42 23 LMP That's ridiculous; how'd we ever get here anyway?

04 05 42 25 CDR (Laughter)

04 05 42 28 LMP Why would a guy want to put his ass on the line like this?

04 05 42 31 CDR (Laughter)

04 05 42 34 LMP Bet you those prunes are going to lay in my stomach like a rock.

04 05 42 46 CDR God damn - damn! I hate you, water bag! Look at that!

04 05 42 52 LMP That's a deep crater, that great big one there.

04 05 42 54 CMP Oh, yes.

04 05 42 55 LMP The one that's a hole, with all that tucked in.

04 05 42 57 CMP Yes. Yes.

04 05 43 05 CDR You know, I think that's something that the scientists just didn't really realize at all is

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[REDACTED]

that the Moon has been relatively untouched for billions of years.

- 04 05 43 16 LMP Look at that fantastic freaker right here.
- 04 05 43 18 CMP ... must have been like - -
- 04 05 43 19 CDR Wow!
- 04 05 43 20 CMP - - to be around here. One of the interesting places is over there - I wish I had taken some pictures - where all the craters were kind of - look like where you shoot balls into mud, you know - -
- 04 05 43 30 CDR Yes, yes.
- 04 05 43 31 CMP - - they made angles, but they didn't - they never - -
- 04 05 43 34 CDR Yes, sir. Anything like that - -
- 04 05 43 35 CMP - - they didn't look - nothing - looked real weird.
- 04 05 43 36 CDR They got the idea, just like you said, that that stuff caved in while it was still molten.
- 04 05 43 54 CMP Do you have a wet pack in the LM?
- 04 05 43 55 LMP For dinner?
- 04 05 43 56 CMP Yes.
- 04 05 43 57 LMP ... Do we got one before we go out tomorrow?
- 04 05 44 01 CDR No. You can only have one wet pack; I don't know. I don't remember.
- 04 05 44 04 CMP All you - -
- 04 05 44 05 CDR Yes, you got one.
- 04 05 44 12 CMP Good grief ...!
- 04 05 44 20 LMP Oh, just got a vent tube.
- 04 05 44 22 CDR Al? Right down in here.
- [REDACTED]

- 04 05 44 26 LMP Yes.
- 04 05 44 27 CDR Yes. They got to be - they got to be volcanic. But look how crude this got.
- 04 05 44 35 LMP Yes. That stone is, like you say, billions and billions of years. Hey, are we maneuvering?
- 04 05 44 39 CDR What?
- 04 05 44 44 LMP Funny, sort of looked like we were.
- 04 05 44 53 CDR 120 degrees roll.
- 04 05 44 56 LMP Okay. Man, that's strange. Must have been just the way the crater was.
- 04 05 45 08 CDR We've got quite an inclination to the front, don't we?
- 04 05 45 17 CMP Now. Look at these little tiny vent tubes; that's what they got to be down there. They make them look like --
- 04 05 45 23 LMP Yes. I see, the little dots?
- 04 05 45 24 CMP Yes, and it makes them look like -
- 04 05 45 27 LMP They're birds that run across the sand?
- 04 05 45 29 CMP Yes.
- 04 05 45 32 CDR ... that down there's got ..., that's got to be volcanic.
- 04 05 46 02 CMP How small a crater can you resolve with your eyes from 60 miles?
- 04 05 46 07 LMP I don't know. We figured it out one day, but I don't know what it is. I think we should be able to see - our - our landing site. Recognize the Snowman. Gordon can give us his ... PA.
- 04 05 46 52 LMP How about another bacon? And we'll eat this Canadian bacon and leave one of these kind.
- 04 05 47 15 CDR ... getting Houston, now. Got 6 minutes, though, huh? We'll be on the horn; yak, yak, yak.

04 05 47 21 LMP How about PADs? Do you need your PADs?

04 05 47 24 CDR Let me look. I got to copy a consumables update --

04 05 47 29 LMP No sweat.

04 05 47 32 CDR -- Update to CSM - T_1 and T_2 times for Fra Mauro photographs. Update to CSM; TEI 34 PAD, map update REV 11, CSM DAP PAD, COMM attitude, and HIGH GAIN. Uplink to CSM; state vector, VERB 66 --

04 05 47 49 LMP You got to ... that PAD over there, Dick.

04 05 47 51 CDR Should have caught on at about a - about 45 minutes.

04 05 47 54 LMP Got the PAD over with you? Because I don't see it over here with me.

04 05 48 14 LMP Where in the hell did it go?

04 05 48 27 LMP Okay.

04 05 48 33 CDR Another P30 PAD, isn't it?

04 05 48 37 LMP Going to run the outload.

04 05 48 42 CDR What do we do, PDI 12?

04 05 48 44 CMP Eleven.

04 05 48 45 LMP No, there's PDI 11, right there.

04 05 48 49 CDR Now, I don't know.

04 05 49 14 LMP Wait in line, group. Out in the tunnel maybe. I put one of them up there last night.

04 05 49 51 LMP 49 --

04 05 49 53 CDR There they are, damn it. Just in time.

04 05 50 12 CDR Hello, Houston; 12. Read you loud and clear. How me?

TIME SKIP

04 07 00 42 CMP - - left behind.

04 07 00 43 LMP ...

04 07 00 44 CDR Don't worry about it; you're in good shape.
Here. No, here. Easy.

04 07 00 52 CMP Here, right here.

04 07 00 54 CC Apollo 12, Houston. One minute from LOS, and
things are all looking good now, we'll see you
at 103:47. Over.

04 07 01 04 LMP Roger; 103:47.

04 07 01 08 CDR Okay. The freaking LM's powered up. All right,
Al; you're in good shape.

04 07 01 12 LMP That did it, that one right there.

04 07 01 15 CDR Yes.

04 07 01 18 LMP Put the ... in there, Pete.

04 07 01 20 CDR Right.

04 07 01 46 LMP Now, ... Well, there's nothing we can do. That
hard stuff doesn't want to come out of there, Pete.

04 07 01 56 CDR Yes, that's dried up, ...

04 07 01 58 LMP Sure did.

04 07 02 04 CDR Get that?

04 07 02 06 LMP Got it.

04 07 03 03 LMP Tried this one?

04 07 03 07 CDR Okay.

04 07 03 23 CDR Put it down.

04 07 03 26 CMP ...

04 07 03 30 LMP ... to l. ...

04 07 03 35 CDR Okay. We'll just pull up ...

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04 07 03 51 CDR Did you find it, Dick Gordon, or did I really screw you up? You find that strap? Where was it?

04 07 03 58 CMP ...

04 07 04 01 CDR You can help zip it up, Dicky-Dick.

04 07 04 03 CMP Okay.

04 07 04 15 LMP Where'd this come from?

04 07 04 17 CDR Huh?

04 07 04 18 LMP That ... - what number is it?

04 07 04 21 CDR It's 9, ...

04 07 04 22 CMP It's a dead one. Right? It's a used one.

04 07 04 27 LMP It's a used one but, I mean --

04 07 04 29 CDR Throw it in the disposal thing.

04 07 04 36 LMP Well, let's see how that one looks. Looks okay to me. Get in there and get this LM going.

04 07 04 48 CDR Don't worry; you've got plenty of time, Al. You're going to be so freaking far ahead of the game, it's pathetic.

04 07 04 53 LMP Well, I want to take --

04 07 04 54 CDR Let me have it and I'll stow it. Okay, just a minute, I'll have music and I'll stow it (laughter). Do things right. A little music never hurt anybody. Get that up out of the way, just like that. I need to get under this top bag, right here.

04 07 05 18 LMP Now, ... this freaking suit.

04 07 05 21 CDR Just a minute; let's get Dick squared away.

04 07 05 27 CDR That's where these came out of, wasn't it? Right there. Just a second; I got to get this tidied up here. Just stowing your hose and thing.

04 07 05 41 LMP Going off the COMM.

04 07 05 42 CDR All right - crazy.

04 07 05 46 LMP This here thing has got to go in the - put that in the disposal.

04 07 05 53 CDR All right, just 1 minute, Dicky-Dicky. Are you ready.

04 07 06 09 CDR There you go.

04 07 06 26 LMP ...

04 07 06 28 CMP Sir?

04 07 06 31 LMP I'll go ahead and do it with my hat on.

04 07 06 59 CDR Now, what you need to do is to get in the couch; that's right. And I'll hook you up red to blue and blue to red. All right. Now, how do they tape these things, all the way around this way? Which way do you want these? Huh? Do you want them ... ? No -

04 07 07 22 CDR Just like this?

04 07 07 23 LMP ...

04 07 07 25 CDR Okay. We could take that strut out of here now.

04 07 07 30 LMP ...

04 07 07 34 CDR Okay. And ... all these goodies. And I'll help you with your snap. Meanwhile -

04 07 08 06 LMP ...

04 07 08 27 CMP Okay, it's coming up ...

MUSIC (Call It a Trap by Elvis Presley)

04 07 08 54 CMP Do me a favor.

04 07 08 55 CDR What do you need?

04 07 09 00 CDR Turn what around?

04 07 09 03 CMP ...

04 07 09 06 CDR Okay.

04 07 09 44 CDR What did I just do with my personal dosimeter?
Oh, there it is, ...

04 07 10 29 CDR Okay, both ... are off. ... wanted them.

04 07 10 35 LMP Huh?

04 07 10 57 CDR Take this dosimeter ...

04 07 11 39 CDR I can ... (laughter). No wonder he wanted a ...

04 07 11 52 CMP That always ...

04 07 11 54 CDR You got your little - Hey, where are mine?
Where's that other one? Oh, - okay, that's all
I wanted to know.

04 07 12 02 LMP ...

04 07 12 23 CDR Yes, go ahead and stow all that shit. You stowed
mine, didn't you?

04 07 12 28 LMP ...

04 07 12 31 CDR Okay, there's the McDivitt bag.

04 07 13 03 CDR Let me have the ...

04 07 13 05 LMP ...

04 07 13 08 CDR Do it on lunar surface after its settled down to ...

04 07 13 15 LMP ...

MUSIC (Sugar, Sugar)

04 07 13 39 CDR Okay, babe. I zipped your zipper.

04 07 13 54 CMP No. ... Here you go. I've got both feet in it.
Hey.

04 07 14 11 CDR Here, you got your foot in; that's good. Okay?
Yes. One urinal, one BIOMED, one LCG. Oh, shit!
I forgot about that. Wait'll I take this plug out.

04 07 14 39 CDR How's that come out?

04 07 14 44 CMP There you go.

04 07 14 47 CDR Yes.

04 07 14 59 CDR You're okay.

04 07 15 12 CDR Ready? ... Hello, there.

04 07 15 23 CMP Well, if you're through with the LMP, naturally you're through --

04 07 15 26 CDR Turn around; hang on to this.

04 07 15 37 CDR Yes - hold on to that.

04 07 16 03 CDR Okay?

04 07 16 16 LMP ...

04 07 16 18 CDR Yes, yes.

04 07 16 21 LMP ...

04 07 16 28 CDR Looks good.

04 07 16 33 CDR The LCG is a ... Okay. Everything feel good in there? All right, now, just let me sit down; I don't want to rip your ...

04 07 16 50 CMP Look at ... No, I see ...

04 07 17 10 CDR There you go.

04 07 17 21 CMP Pete, don't these get connected up front?

04 07 17 24 CDR No. There's your blue one.

04 07 17 48 CDR There you go, mate. Go ahead. Okay ...
MUSIC (Hey, Little Woman)

04 07 18 21 CDR All right, babe, you're all right on your time.

04 07 19 18 LMP ...

04 07 19 23 CDR Huh?

04 07 19 50 CDR What time do we ingress the LM?

04 07 19 54 LMP ...

04 07 20 08 CDR Okay, that's about - about 35 minutes from now.

04 07 20 11 CMP Go - go ahead and ...

04 07 20 17 CDR You got a good bag over there - drop that in your waste stowage bag, Dick.

04 07 20 21 CMP Temporary stowage bag?

04 07 20 23 CDR Okay. Stick that in your TSB. Now, I'm going to rig my suit, Al, if you'll hand me those two things by your map - -

04 07 20 32 LMP ...

04 07 20 34 CDR -- Right down here. What do you need in here? Well, if you'll wait about 3 seconds, Dick, we'll be able to do it and be ahead of schedule. Okay?

04 07 21 30 CDR Al, want me to close your TSB for you?

04 07 21 42 CDR Well, let me out. God damn, I was wondering why I was getting wet; there's water under the bulkhead on the - underneath the LC bag. That's where that moisture's been collecting.

04 07 23 16 CDR Keep going ... freaking hell ... God damn! Oh, man, that's bad news! That ... is bad news. My suit is sopping wet all over the legs; that bulkhead has leaked right through that LC bag.

04 07 23 41 LMP ...

04 07 23 42 CDR Huh?

04 07 23 43 LMP ...

04 07 23 44 CDR I hope so. I haven't explored around far enough to find out. It's all down the back of the legs. That damn ... after we leave on the ...

04 07 23 57 LMP ...

04 07 24 39 LMP ...

04 07 24 48 CDR Well, damn, we've got to; it won't fire up the ECS for a while.

04 07 25 02 LMP ...

04 07 25 05 CDR Get what? All right, tell you what. Right there by the center hatch is my sunglasses - and the helmet bag is up there to the right side of my pencil.

04 07 25 38 CDR Sunglasses are in the helmet, right there. I don't want the helmet. That's all right.

04 07 25 47 CMP ... sunglasses?

04 07 25 48 CDR I need the sunglasses, a flashlight, and a pen.

04 07 25 58 CMP ...

04 07 26 14 CDR Right by the pencil.

04 07 26 15 CMP ...

04 07 26 17 CDR It was up there a while ago.

04 07 26 31 CDR Let's go ahead and take the hatch out; you can stay put. Let me see now, where I can ... No, better put it under Al's couch. Al? You put your hoses ... where they ...

04 07 26 52 CDR Dick? I'm going to let Al get out of here before I suit up.

04 07 27 27 LMP How do you hear, Dick Gordon?

04 07 27 32 CMP ... loud and clear.

04 07 27 34 LMP Okay. Got a bunch of shit floating around here; I never saw anything like it.

04 07 27 40 CDR Whose helmet's this, Dick's?

04 07 27 42 LMP Mine, I guess. Damn.

04 07 27 44 CDR Something else we'd better check - in just a minute. Boots and ...

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04 07 27 52 CMP Okay, that's okay. That's good. A hat, get this TSB; look at that son of a gun go.

04 07 28 00 LMP Here.

04 07 28 02 CMP Get it out of your way.

04 07 28 04 CDR One hatch ...

04 07 28 07 CMP Here's the monocular. Okay, Bean, let's see if you got it.

04 07 28 13 LMP Hey, Pete, why don't I go ahead and do that? I know where the hell these things go and everything.

04 07 28 15 CMP IV gloves.

04 07 28 16 CDR Okay. All yours. I just figured we'd get them out of here without - -

04 07 28 21 LMP Yes. Yes, I'd just as soon go ahead and get the shit done.

04 07 28 24 CDR - - ... I'll get out of your way.

04 07 28 27 LMP The other way. I better get in the center couch - it's going to be tough - Well, I guess you can stick it under my feet. Well, we'll just do what you can. Better shut this map.

04 07 28 48 LMP Rendezvous abort book and LM data. We got that data?

04 07 28 52 CMP God damn it!

04 07 28 54 LMP My time line book. I can move if you need me to, Dick.

04 07 28 56 CMP No, sorry. It's just these hoses are so bad. How about putting that down somewhere?

04 07 29 02 LMP Sure.

04 07 29 04 CDR ...

04 07 29 16 LMP Everybody's doing a good job; they're holding their temper.

04 07 29 21 CDR ... I can't believe it.

04 07 29 28 CMP That's where we want to be. Set over there and think how - -

04 07 29 32 LMP Turn on tunnel lights, please.

04 07 29 33 CDR Tunnel lights, coming on.

04 07 29 39 LMP 103:54, it says I'm supposed to get there. What time is it now?

04 07 29 45 CMP Wait, now wait; don't let my bag go anywhere. Okay, I got you. I'm going to - God damn these freaking hoses!

04 07 29 58 LMP Can I help you some way, Dick?

04 07 29 59 CMP Yes, just get the goddamn hoses out of my way.

04 07 30 01 LMP Okay. We can get in there now, if you - How's that, babe? We're just screwing around over here, babe.

04 07 30 10 CDR Got a lot of time.

04 07 30 11 LMP We're way ahead. I'm not even due in until 53 and that's 23, 24 minutes from now. You're not kidding. I just won't turn on the BAT. Get all the other stuff done.

04 07 30 25 CDR Hey, another one - Hey there; look, grab that freaking clip.

04 07 30 30 CMP Clip.

04 07 30 31 CDR Grab a bunch of trash; that stuff should never been hauled out. It causes more crap. If we didn't have those things, we wouldn't have as much crap outside floating around.

04 07 30 54 LMP (Laughter) Doesn't sound like the Pete Conrad I know; it's usually (laughter) - it's usually, "Out of my way, gang, we've got to get going." (Laughter) Why didn't you just - -

04 07 31 02 CDR ... do it right, gang, ... cards are floating around; ... time, and it'll save us time.

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04 07 31 11 CDR You son of a bitch!

04 07 31 12 CDR ... get that in there early -

04 07 31 14 LMP Yes, lift it up and let me get this in here and then we can - There you go - I'll shoot this in here.

04 07 31 36 LMP Snap one snap back here. That'll keep your's in place. That's good. Snap this one over here - get this one in place. There goes the thruster fire -

04 07 31 47 CMP Yes, we're moving around.

04 07 31 50 LMP Where can I put this? Now, I'll tell you what I need. When did I take that last pill? I'm going to make sure I don't get my ears stopped up.

04 07 32 16 CDR Here, ...

04 07 32 22 CMP Anybody want any gum?

04 07 32 33 LMP We - When we get in, we want to check over all those damn - books, make sure we got them. Oh, I put them all in my mouth, Pete; sorry. Wasn't thinking.

04 07 34 01 LMP We're not supposed to be charging any BAT, are we?

04 07 34 04 CDR Yes, I thought we were already charging this BAT.

04 07 34 06 LMP No. We talked about it last night, but we never called it out this morning - -

04 07 34 11 CDR I thought he told us to start charging it.

04 07 34 14 LMP He may have and, if he did, I sure as hell didn't hear him and didn't do it.

04 07 34 20 CMP All right. ... got COMM ... hooked up.

04 07 34 23 LMP Yes. I got COMM, but -

04 07 34 34 LMP Hey, Dick?

04 07 34 35 CMP Al, just pull those hoses around like this. That's the boy; that'll do it. All it does is block that whole freaking area.

04 07 34 44 LMP Didn't know I was doing it.

04 07 34 46 CMP Well, you probably weren't; they probably just went that way.

04 07 35 08 CMP If I can get out of here whenever these - -

04 07 35 09 LMP Pete, wait a minute - raise your seat.

04 07 35 12 CDR This way?

04 07 35 13 LMP Yes. That's a boy. Thank you.

04 07 35 37 CDR Doesn't say to in the plan. Hey, Dick Gordon? Now, where the hell did that strap go? There it is.

04 07 35 47 CMP Yes.

04 07 35 48 LMP Did they tell us to charge a BAT this morning?

04 07 35 51 CMP I don't think so.

04 07 35 53 LMP Okay.

04 07 35 54 CMP Is it in the flight plan?

04 07 35 55 LMP No.

04 07 35 57 CMP We talked about it last night, but I never heard any; I could - of course, I could have been off the COMM.

04 07 36 07 CDR Somewhere along here, we want to go off LM ..., right?

04 07 36 12 LMP Off what?

04 07 36 13 CDR We're on LM PRESS. We got to go back to something else.

04 07 36 18 CMP Well, we go to OFF here, shortly, I guess.

04 07 36 37 LMP Probably kicking the hell out of you down there, Dick.

04 07 36 42 CDR God damn this freaking ...! Boy, this ... up on everything.

04 07 36 48 CMP Sure does, that net.

04 07 36 50 CDR ... set the clock.

04 07 36 54 LMP Hey, Pete.

04 07 36 55 CDR Yes.

04 07 36 59 LMP If you'll hold this, and Dick Gordon will hand me that T - Hey, I - I'll rig that TV for you. If you want me to, do what you want. It's in there.

04 07 37 12 CDR ... - -

04 07 37 13 CMP Guess where that goddamn thing is?

04 07 37 16 CDR Underneath the probe. I'll go get it. Hey, Dick? I don't have a suit on - -

04 07 37 20 LMP Let Pete get it; he doesn't have a suit on or anything else.

04 07 37 22 CDR - - we have all the freaking time in the world.

04 07 37 24 LMP Let me get my ass over in the LM - stand around over there.

04 07 37 29 CDR Get that - ready to go and I'll rig - Dick, get me that - I'll rig it for TV.

04 07 37 40 CMP Okay.

04 07 37 41 CDR The thing to do is get rid of these goddamn things - -

04 07 37 43 LMP Boy, I'll tell you, that's a pain in the ass; everyone of those bastards are.

04 07 37 45 CDR - - I had three freaking little clips and - take those - -

04 07 37 48 CMP Wait, the map's stuck.

04 07 37 51 LMP Well, I need to go over there and I can't.

04 07 37 52 CMP No, you need to go that way. That's exactly the way you need to go.

04 07 37 55 CDR You got to go that way.

04 07 37 56 CMP You'll never get out of here unless you do.

04 07 37 58 LMP I know it but - see this - -

04 07 38 00 CDR I'll get you out of here.

04 07 38 02 LMP I lowered this a little bit - is that okay?

04 07 38 11 CMP Got it made.

04 07 38 13 LMP Just a second; I want to miss all these circuit breakers. They're okay.

04 07 38 19 CDR Put your feet up; just go right up in the tunnel.

04 07 38 24 CMP Put your feet up, Al.

04 07 38 25 LMP Okay.

04 07 38 26 CDR ...

04 07 38 31 LMP Wait a minute; just a second. My shoulders are wider than the distance between - There. Wait a second.

04 07 38 37 CDR You're all right.

04 07 38 39 CMP You're okay; got plenty of room.

04 07 38 45 LMP Okay, now, do me a favor as you send me through. You're going to have to hand me my helmet bag and the TSB and - -

04 07 38 52 CDR Here's the ... bag.

04 07 38 54 LMP Okay.

04 07 38 55 CDR Your helmet bag is right here. Now, do you want this helmet bag? Or do you want to leave the bag back - -

04 07 39 02 LMP No, I'm going to send the bag back to you.

04 07 39 04 CDR All right, here.

04 07 39 05 LMP Now, here's what I'd like to have you do, if you would.

04 07 39 06 CDR Yes.

04 07 39 07 LMP As I slowly go up here, how about snapping a few of those things in?

04 07 39 09 CDR I will.

04 07 39 10 LMP Okay.

04 07 39 11 CDR Here's your helmet bag, and I'll feed the hoses. ...

04 07 39 25 CDR Wait, wait, wait - Okay.

04 07 39 35 CMP Let me run it down; give you a little more - slack - -

04 07 39 38 CDR ...

04 07 39 39 CMP Just a second. We're way ahead.

04 07 39 46 LMP Yes, let's stay that way. Move.

04 07 39 53 CDR You are in, ...

04 07 40 00 LMP Okay.

04 07 40 01 CDR You might have to do a 360 down there and unwind this hose.

04 07 40 05 LMP Okay. Now, it doesn't seem to bother me, right this minute. I'll try one this way. Okay.

04 07 40 12 CDR That looks good. Looks real good, Al.

04 07 40 15 CMP Okay. I'll go get the TV.

04 07 40 16 CDR Don't you want to get back in your couch ...

04 07 40 19 CMP No, I better get the hell out of the way.

04 07 40 21 CDR I'll tell you one thing, I can't believe it.

04 07 40 26 CMP Have it coming off there in just a minute, anyway.
I'll put the interconnects on.

04 07 40 37 CDR Now, I've got to go over here and ... we got to
move this whole thing to get it.

04 07 40 42 CMP Yes, I know it. Shit, that pissed me off! I
talked about it before. Wait a minute, let me -
hold it right there. Can you get this stuff out
of there need?

04 07 41 00 CDR ... cables and monitor. I'll get the ...

04 07 41 16 LMP Is anything flowing through my hose?

04 07 41 18 CDR Is your what?

04 07 41 19 LMP Put my hose on SUIT FLOW.

04 07 41 22 CDR How's that?

04 07 41 24 LMP There you go, good show.

04 07 41 29 CDR ... leave that ... right where it is. Now, where's
the TV now, ...

04 07 41 52 CMP Where is it?

04 07 41 53 CDR Right up under my ass ...

04 07 41 57 CMP Put that back in there.

04 07 42 01 CDR Hey, Dick? ...

04 07 42 11 CMP Wait a minute, Pete. Take this off my hands and
I'll get it out for you. They've rigged this
crap so it'll be up.

04 07 42 21 CDR ...

04 07 42 24 LMP Pete?

04 07 42 25 CDR Yes?

04 07 42 26 LMP Here comes something, just -

04 07 42 28 CDR What?

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04 07 42 30 LMP I - I'll call you in a minute. I'm just going to throw one of the helmet stowage bags back, including my TSB; no hurry.

04 07 42 44 LMP Gee, I'll tell you where the TV mount is.

04 07 42 45 CMP Never mind; we got it.

04 07 42 46 LMP By the tape. Now, let me tell you the best way to do it.

04 07 42 49 CMP Is that all set up for the window?

04 07 42 50 LMP No, but if you hand it here, I'll set it real quick, and it'll save explaining it.

04 07 42 54 CMP Now, which way are we doing it?

04 07 42 56 LMP Put orange to orange on both. See, now, that one clamp has a little orange-to-orange dot and then the circular has an orange-to-orange dot. The best thing to do is take it over by the window because, otherwise, you'll never guess it in a million years. Stick this thing in the hole and you've got --

04 07 43 09 CMP What are you doing to ... here?

04 07 43 11 LMP What? I - I can't remember it either. Let me do the orange one, though. I'll rig this and you just go over - I don't know whether it sits on ... this one or the side one, I never can remember, but I'll fix this where it works. Okay, that goes there and this color TV one goes - orange to orange. Now, that should be pretty close; but, when you stick it over there, you may find out it needs to be on that bracket. I'm not for sure which. Okay? And take this with you and put it right by - in the TSB. Good.

04 07 44 17 CMP Did you want this TV - a lower one?

04 07 44 19 LMP It's got TV mount on it.

04 07 44 21 CMP Oh, yes; I see it.

04 07 44 37 LMP These windows are all fogged up; when we - when we come on with power, we're going to have to come on with the window heaters.

04 07 44 47 CDR ...

04 07 44 49 LMP The middle one. It says TV right on it. That's it.

04 07 44 59 CDR I think this ought to be f:22 ...

04 07 45 12 LMP ... guys are too much. Oh, that makes me mad.

04 07 45 17 CMP What's the matter, Al?

04 07 45 21 LMP We complained about this damn bag one time and they claimed they fixed it. They sure as hell didn't. Easy, Pete.

04 07 45 28 CDR I'm just going to shove it straight in; you're just not shoving it in all the way.

04 07 45 31 CMP I know. It won't go all the way. There it goes. ...

04 07 45 38 CDR That looks okay.

04 07 45 45 CMP ... Everything. ...

04 07 46 18 CMP Let me have your monitor ...

04 07 46 44 CMP Where in hell is my helmet?

04 07 46 47 LMP I put it behind my seat, Dick.

04 07 46 49 CMP Okay.

04 07 46 50 CDR ...

04 07 47 04 CDR Hey, Al?

04 07 47 05 LMP Yes, sir.

04 07 47 06 CDR That TV kind of interferes with the ...

04 07 47 11 LMP It sure does; it just barely doesn't when it's rigged right. It just barely misses it.

04 07 47 16 CDR We'll need it rigged right; that's for sure. ... now, but it doesn't look right to me.

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04 07 47 25 LMP Well, loosen it up some then, and move it over just a tad. Loosen up on the ball. That one right there. You've got to be kidding on this rig. Come out any further? Hell, that's good enough anyway, isn't it?

04 07 47 45 CDR ... TSB.

04 07 47 46 LMP Huh?

04 07 47 58 CDR ...

04 07 48 02 LMP Uh-oh.

04 07 48 03 CDR What?

04 07 48 04 LMP Son of a gun - No, it's not the LM. Hey, look in that MED kit and bring me a whole cellophane roll of those decongestants; they don't have any in here. They got everything but that.

04 07 48 21 CDR I'll get it in a minute.

04 07 48 22 LMP Okay, just so we don't forget it. Pain in the ass, huh?

04 07 48 30 CDR No, it's not - ...

04 07 48 37 CMP ...

04 07 48 40 CDR Bring this down ...

04 07 48 48 LMP McDivitt's purse is enough to make --

TIME SKIP

04 08 59 17 CDR Understand, Houston. The LMP, of course, is back in, and we're going to press with everything that doesn't need MSFN.

04 08 59 29 CC Roger. So long, Clipper.

04 08 59 33 CDR Roger, Houston.

04 08 59 43 CDR Okay, Yankee Clipper; Intrepid. We're going to start giving you data now.

04 08 59 48 CMP Okay. I'm ready to record.

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04 09 00 18 LMP Yankee Clipper, Intrepid. Are you catching my B-data now?

04 09 00 21 CMP That - that's affirmative, Al.

04 09 00 23 LMP Thank you.

04 09 00 27 CMP Hey, Pete, I've preloaded this - this - probe now. Can you take another quick check at the docking latches?

04 09 00 34 CDR Roger. Hatch all locked up.

04 09 01 12 CDR Okay, pal. I've put my helmet and gloves on and cocked all the latches for you. Okay.

04 09 03 10 CDR Oh, shoot!

04 09 04 26 CDR That's better.

04 09 04 40 CDR How're you doing over there, Yankee?

04 09 04 47 CMP I'm just getting bused up, Pete.

04 09 04 50 CDR Okay. Give me a holler when you're all bused up; I'm going to step ahead on a few items.

04 09 05 04 CDR Are you in ATTITUDE HOLD?

04 09 05 20 CMP Hey, Pete.

04 09 05 21 CDR Hey, Dick, are you holding attitude? You are; aren't you?

04 09 05 24 CMP Yes, but I've got to turn the roll jets to - to OFF until I get the capture latches. Got to get the latches and get the hatch in and bleed the tunnel down. I can't maneuver yet. You're just going to have to wait on me.

04 09 11 19 CDR Yankee Clipper, Intrepid.

04 09 11 26 CMP Go ahead, Pete.

04 09 11 28 CDR What you doing?

04 09 11 31 CMP Putting the hatch in right now.

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04 09 11 33 CDR Oh, okay. I'm going to pressurize my RCS; you may hear it.

04 09 13 16 CMP Okay, Pete. I'm depressurizing the tunnel.

04 09 13 20 CDR Okay.

04 09 13 23 CMP It's going to take a while and, as soon as we get it down to 3.5, I'll have a couple of jets on, so we really haven't rolled very far.

04 09 13 30 CDR Okay.

04 09 13 36 CMP That's kind of work with this suit on.

04 09 13 40 CDR I'll bet it was.

04 09 15 23 CMP Okay, Pete. I've got the tunnel down a little bit. How's your cabin look?

04 09 15 27 CDR It's holding real good, Dick.

04 09 15 29 CMP Okay. I'm going to go ahead and bleed it down the rest of the way.

04 09 15 32 CDR Let her go.

04 09 15 58 LMP ...

04 09 18 49 CDR Gad, I hope I can land.

04 09 21 34 CDR Say, Yankee, what's the tunnel down to?

04 09 21 37 CMP Okay. I'm down to 3 pounds - differential.

04 09 21 40 CDR Going to let her keep going, huh?

04 09 21 41 CMP Yes, sir. Keep it going.

04 09 21 43 CDR Okey-dokey. But are your roll jets back on?

04 09 21 48 CMP Well, I'll have two of them back on at 3.5, Pete.

04 09 21 51 CDR Okay.

04 09 27 54 CMP Hey, Pete?

04 09 27 55 CDR Go ahead.

04 09 27 56 CMP I see three of your landing gear pads are deployed.
I can see three of them.

04 09 28 01 CDR Okay. What's the tunnel now?

04 09 28 04 CMP Let me look. It should be down where we can get some jets on here.

04 09 28 29 CMP Okay - okay, Pete. It's down to about 3.8; I can turn two roll jets on.

04 09 28 37 CDR Okay. How do you know when it gets to zero?

04 09 28 40 CMP As it gets above 4, I can turn four of them on.

04 09 28 43 CDR Okay.

04 09 28 44 CMP So it'll be okay. Then we're right back at the same attitude.

04 09 28 52 CDR Okay, Dick. And as soon as we get these guys AOS here - I've got the fine torquing angles in, so what we want to give them is an 06, 20.

04 09 29 06 CMP Okay.

04 09 36 31 CDR Say, did you see those two craters we just flew over, Dick?

04 09 36 34 CMP Negative.

04 09 36 36 CDR Man, that's a mighty impressive territory down there; I'll tell you that.

04 09 36 41 CMP Oh, that - The big ones right behind us. You're talking about the big one, right down at your footpad right now.

04 09 36 47 CDR Yes.

04 09 36 48 CMP Yes. I see that.

04 09 36 50 CDR I - I - I keep estimating that if I was flying over the desert, I'd be about, at the most, 20 to 30 000 feet.

04 09 36 58 CMP That's what I keep thinking. Why is that?

04 09 37 00 CDR Sixty miles up.

04 09 37 01 CMP That's what I keep thinking. I wonder how come?

04 09 37 09 CMP I can't believe you're at 60 miles.

04 09 37 12 CDR I can't either. I hope I can get myself oriented when we get down lower.

04 09 37 43 CMP Okay. The only thing I'll remind you of on this one; I got to get my tracking attitude at 5 by 106:10. I think we can do that.

04 09 37 52 CDR Yes. I'm going to honk when we get here, Dick. I'm way ahead on several things, and I think we can beat the rap here pretty good. What time's AOS?

04 09 38 09 CMP Forty-five.

04 09 38 11 CDR Okay. Right about 46, let's grab a quick 06 NOUN 20.

04 09 38 25 CMP Things are looking awful good over here, Pete.

04 09 38 28 CDR Look good here, too, Dick.

04 09 41 39 CDR Did you check out your TV yet, Dick?

04 09 41 43 CMP No, I haven't. But I might.

04 09 46 35 CC ... Over.

04 09 46 41 CMP Hello, Houston; Clipper here.

04 09 46 45 CC Roger, Clipper. Give us P00 and ACCEPT --

TIME SKIP

04 10 15 46 CMP Okay, any time, Pete.

04 10 15 49 CDR Okay, on my mark. 4, 3, 2, 1 -

04 10 15 55 CDR MARK.

04 10 15 57 CMP Houston, R_1 reads plus three balls 44; R_2 , plus 26956; R_3 , plus 00054. Over.

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04 10 15 59 CC ...

04 10 16 14 CDR Okay, Houston. Plus 29928, plus 08952, plus 35934; the time, 106:15:55.

04 10 16 33 CC Roger. At 106:15:55, ... plus 26956, ...

04 10 16 56 CDR That's a Charlie.

04 10 16 58 CC And that GET was 106:15:55. Affirmative?

04 10 17 03 CDR That's affirm. Okay, Houston. You've been keeping tabs on us; make sure I got this right. It seems to me we're complete through 107 hours, or at 46. We're standing by to pick up with a rendezvous radar self-test and AGS CAL. Do you see anything before that we haven't done?

04 10 17 38 CC Give us a second to review, Pete. We think you're okay.

04 10 17 41 CDR Okay, smoke her over. I don't want to leave anything out.

04 10 19 24 CC Intrepid, Houston.

04 10 19 27 CDR Go, Houston.

04 10 19 31 CC Okay. We're up with you, Pete. You're at 107.

04 10 19 36 CDR Okay, I think that's going to work real good, then, because, while Dick's not firing any thrusters for AGS CAL, we'll get the rendezvous radar self-test out of the way.

04 10 19 47 CC Roger.

04 10 20 35 CDR Let me know when you're going to start tracking, Yankee.

04 10 20 38 CMP Okay, Pete. I've got 66 degrees' trunnion yet for REV align along with it; and it's got to come down to 22 before I'll pitch over.

04 10 20 47 CDR Okay, you know where you are?

04 10 20 50 CMP Sure, I'm smoking over the scenery out in front of me.

04 10 20 52 CDR That's good. Okay, let me know if you see the Snowman when you go by.

04 10 20 59 CMP Okay.

04 10 21 04 LMP Houston, Intrepid. We forgot to give you our RCS helium pressure.

04 10 21 08 CDR No, I gave --

04 10 21 09 LMP It's about 2950.

04 10 21 13 CC Roger, Al. Thanks.

04 10 21 16 CDR It's okay. The LMP was outside when I gave it to you.

04 10 21 29 LMP He wasn't either; he was over here seeing what he forgot.

04 10 22 21 CMP Houston, Clipper.

04 10 22 26 CC Clipper, Houston. Go.

04 10 22 28 CMP I was just looking over the electrical system. Do we have a battery A charge scheduled this afternoon?

04 10 22 53 CC That's negative. ...

04 10 23 00 CMP Well, you going to make that SPS burn? That battery A is down quite a bit.

04 10 23 16 CC ...

04 10 23 21 CMP We may have missed one along the way; I'm not sure.

04 10 23 42 CMP Hey, Pete. We're getting close.

04 10 23 44 CDR Okay, Dick. Do your usual good job.

04 10 23 50 CMP I'll do my best.

04 10 23 52 CDR I know that.

04 10 27 00 LMP Damn that thing.

04 10 27 05 CDR How you doing, Clip?

04 10 27 08 CMP Okay, Pete. It's 106:30. I'll be starting to pitch over, so hang on.

04 10 27 13 CDR Okay. We'll be watching our antenna. We're still on HIGH GAIN.

04 10 27 16 CMP Okay. It's coming down into the field of view.

04 10 27 22 CDR Have at her.

04 10 29 10 CMP Okay, Pete. I've got the target.

04 10 29 12 CDR Good show.

04 10 29 27 CMP Looks pretty good down there.

04 10 29 48 CDR What do we do with it? Which way are we -

04 10 32 00 CDR Boy, oh boy, Houston. Do we have a fantastic view of Copernicus!

04 10 32 10 CMP Okay, Pete, my boy. I gave you five of my best ones.

04 10 32 14 CDR Good show, Richard.

04 10 32 18 CMP Let's see. We owe Houston --

04 10 32 19 CC -- ... Snowman look, Dick?

04 10 32 21 CMP Hey, I didn't get half a chance to really look at it that time, Jer.

04 10 32 27 CDR Hey, Dick, I don't know if you can see it, but if you can, you ought to take a look at Copernicus, there. That is really something else!

04 10 32 40 CDR And we owe them an 06, 20, whenever you get stopped.

04 10 32 48 CMP Yes, I'm just looking at Copernicus. Houston, let me know when you got the data.

04 10 32 55 CDR Isn't that something?

04 10 32 57 CMP Sure is.

04 10 32 58 CC ... Clipper.

04 10 33 18 CDR Where - where are you going, Dick?

04 10 33 21 CMP I'm going to pitch to 158. Just going to let it continue pitching.

04 10 33 26 CDR Okay - -

04 10 33 27 CC Clipper, Houston. We have your data.

04 10 33 30 LMP Okay. For what?

04 10 33 33 CMP That's for an 06, 20, and then I'll go out for the AGS CAL.

04 10 33 36 LMP Okay, very good.

04 10 33 40 CMP Look pretty nice down there, Pete.

04 10 33 44 CDR I hope so.

04 10 33 53 CDR Boy, I'll tell you, I can't get over Copernicus. Houston, that - There's nothing in any other part of the Moon that we've seen since we've been here that even looks like that.

04 10 34 26 CDR Did you get that, Clipper?

04 10 34 29 CMP Yes.

TIME SKIP

04 10 57 27 CC ..., Houston.

04 10 57 32 CDR Go ahead, Houston.

04 10 57 35 CC Roger. We're about a minute from LOS. Everything's looking real good. Your computer and everything is fine. ...

04 10 58 00 LMP What's a DUA?

04 10 58 06 CC ... that's your digital uplink assembly.

04 10 58 10 LMP Oh! Okay.

04 11 00 59 CDR Dick, we're doing our integrity checks now.

04 11 01 02 CMP Okay, Pete, I'm just - slowly maneuvering to the burn attitude.

04 11 10 25 CDR Yankee, Intrepid.

04 11 10 27 CMP Go ahead, Pete.

04 11 10 28 CDR Okay. Verify CSM tunnel hatch PRESS equalization, the tunnel vent valves closed, and the tunnel vented.

04 11 10 34 CMP Right. Verified.

04 11 10 36 CMP Okay.

04 11 14 48 CMP What's all - what's all that oil-canning about over there, Pete?

04 11 14 52 CDR We're doing our pressure integrity check, Dick. We have the cabin coming down to 3-1/2, and we're doing our preburn checks, and we just reset the cabin to 5 now.

04 11 15 05 CMP Sure making all kinds of noise.

04 11 16 20 CDR Yankee Clipper, Intrepid. We're going to pressurize the DPS now; you may hear something.

04 11 16 25 CMP Okay.

04 11 20 45 CMP Bastards!

04 11 28 01 CDR ... seen before ...

04 11 28 07 LMP ...

04 11 28 15 CMP How you guys doing over there?

04 11 28 17 LMP We're just completing the PREP for undocking, Dick.

04 11 28 22 CMP Okay.

04 11 30 10 LMP Hey, Dick, I hold at 23 minutes and 48, 47, 46 seconds from undock.

04 11 30 16 CMP Okay. ...

04 11 30 18 LMP We're complete and we're standing by.

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04 11 31 53 CDR Dick, what time's AOS?

04 11 31 58 CMP 107:44:39.

04 11 32 36 CDR Hey, Dick, did you check the TV?

04 11 32 43 CMP No, I didn't, Pete. They got the tape on. I'll check it as soon as we get AOS.

04 11 32 54 CMP They've had the tape running on the back side.

04 11 32 57 CDR That was a good show you did, there. Sounds like you did a hell of a job tracking.

04 11 33 03 LMP Thank you, Dick.

04 11 33 06 CMP Well, that's what I'm along for, is to give you all the help I can. It looked pretty good down there, Pete.

04 11 37 06 LMP What time was AOS? 44, Dick?

04 11 37 10 CMP Yes, that's right. 44:39.

04 11 37 16 LMP How's it over there, all buttoned up?

04 11 37 19 CMP Lots of space. I've got the seat down and the struts off. I'm about to take this suit off.

04 11 37 28 CDR Dirty dog.

04 11 37 33 CMP I figure I can get into it.

04 11 37 36 CDR Yes, I got into mine without any help, except for the zipper; and, as long as you've got the lanyards, you're okay.

04 11 40 45 CMP Hey, Al, where'd you put the PAD book?

04 11 40 50 LMP It's either in my little stowage compartment or I gave it to you. I don't remember which one, Dick. I always - I always keep the PAD in that little metal box by my right shoulder.

04 11 41 04 CMP Okay.

04 11 42 10 CMP Well, I don't find it. I thought you copied a TEI PAD this morning; but I don't know what you did with it. then.

04 11 42 18 LMP Well, that's about the only place I could keep it, so it's got to either be that - You might look in my TSB, but I never put anything in there like that. Or you might look in yours. Seems to me I - I put it in that metal box; just kind of pull everything out and it'll probably be kind of squished in there.

04 11 42 33 CMP Okay, I'll find it later, Al. I'm not worried about it. It's around somewhere, I'm sure.

04 11 42 39 LMP I swear I didn't steal it.

04 11 42 42 CMP Okay.

04 11 42 51 LMP That'll teach you to take the tape recorder when I'm listening to my favorite song.

04 11 42 55 CMP Oh, you noticed, huh?

04 11 44 42 CDR Man, this is some rugged country down there, isn't it?

04 11 44 46 LMP You'd better believe it.

04 11 45 04 CMP Hello, Houston; Yankee Clipper here.

04 11 45 09 CC Yankee Clipper, Houston. Loud and clear.

04 11 45 11 CMP Okay. If you'll kill my tape for me, I'll get the TV on.

04 12 54 28 CDR Yes. Okay. I'm going to - -

04 12 54 30 LMP Plus 12 at zero. ...

04 12 54 37 CDR Dick, you couldn't look out the AOT and - and see this thing. Hell, I can see the stars in broad daylight with the cockpit light up. There it is.

04 12 55 58 CC Intrepid, Yankee Clipper, you're looking good. One minute to LOS; we'll see you on the other side.

04 12 56 04 CDR Yes, sir, and after all that jazz about the - the LPD, old Aldebaran is a half a degree off in yaw and a half a degree off in pitch, which is at the noise level; and I can see it out the window; no strain.

04 12 56 21 CC Beautiful, Pete; beautiful.

04 12 56 29 CDR Okay, it's 1 degree off. Forget it.

04 12 56 31 LMP You want to mark it; you want to mark it with this thing right here?

04 12 56 34 CDR No, hell no; I know where it is.

04 12 56 36 LMP All right, babe. Get some lights in this thing.

04 12 56 39 CDR Turn them up.

04 12 56 43 LMP We don't need to - -

04 12 56 44 CC Intrepid, Houston. Is that in relation to your new mark or the old one?

04 12 56 47 CDR No. That's right around the 40 mark. It's off about three-quarters of a degree to the right and about a tenth of a degree down in pitch. Beautiful. Not even worth fooling with.

04 12 56 59 LMP You just lost him, Pete.

04 12 57 00 CDR Yes.

04 12 57 01 LMP Okay. Now wait a minute. Where was I?

04 12 57 03 CDR Hey, Dick, go ahead and start catching my data, babe.

04 12 57 10 LMP You better call him.

04 12 57 12 CDR Okay, now. This detent closed?

04 12 57 15 LMP It's closed. ... checked out.

04 12 57 17 CDR PGNS MODE CONTROL, ATT HOLD.

04 12 57 20 CMP Yankee Clipper, Intrepid.

04 12 57 23 LMP Go ahead.

04 12 57 26 CMP I'm taking your data, Al.

04 12 57 29 CDR Hello, Yankee Clipper; Intrepid.

04 12 57 31 CMP Go ahead. Where'd you go?

04 12 57 35 CDR I don't know.

04 12 57 37 CMP Hey, Al, go ahead.

04 12 57 38 LMP Okay. Both VHF A, SIMPLEX; record LM data. Here it comes, babe.

04 12 57 43 CMP Roger. I was already there.

04 13 07 04 CDR Hey, Yankee Clipper; Intrepid.

04 13 07 07 CMP Go ahead.

04 13 07 08 CDR Is it all right with you if we turn our track light off?

04 13 07 10 CMP Sure is.

04 13 07 11 LMP Well, we want to save it.

04 13 08 01 CDR And, Clipper, we're maneuvering to the DOI burn attitude at this time.

04 13 08 05 CMP Okay. How - how many minutes you got to go?

04 13 08 09 CDR Oh, about 16 - 15-1/2.

04 13 22 40 CDR We just passed 1 minute, Yankee Clipper.

04 13 22 44 CMP Okay, Pete. Right with you.

04 13 22 50 CDR I'll go over to VOX for you, so you can hear it. Dick, how do you read me?

04 13 22 53 CMP Loud and clear.

04 13 22 54 CDR Okay. Can ***

04 13 23 04 CDR Yes, DSKY's blank. You hear me?

04 13 23 09 CMP Yes, sir.

04 13 23 11 CDR DESCENT ENGINE's armed.

04 13 23 12 CMP Okay.

04 13 23 14 CDR Standing by for ullage. You got 10 percent on the Commander's gage.

04 13 23 28 CDR 10, 9, 8, ullage, 6, 5, flashing 99, engine's armed, 2, 1 -

04 13 23 39 CDR IGNITION.

04 13 23 40 CDR Burning; good. To what, 15 seconds?

04 13 23 44 LMP 15 ***

04 13 23 46 CDR 15 seconds. 7, 8, 9, 10, 11, 12, 13, 14, 15.

04 13 23 55 LMP Go to 40 ***

04 13 23 57 CDR 40 percent.

04 13 23 58 LMP Okay, now --

04 13 23 59 CDR 18, 19, *** 21, 2, 3, 4, 5, 6, 7, 8 -

04 13 24 09 CDR SHUTDOWN.

04 13 24 10 LMP Okay.

04 13 24 12 CDR Okay.

04 13 24 13 CMP How's the burn, Pete; how's the burn?

04 13 24 15 CDR Oh, it's a good burn. ENGINE ARM, OFF.

04 13 24 17 LMP ENGINE ARM, OFF.

04 13 24 18 CDR MASTER ARM, OFF.

04 13 24 19 LMP MASTER ARM, OFF.

04 13 24 20 CDR You're not trimmed.

04 13 24 21 LMP Huh?

04 13 24 22 CDR You're not *** Go PRO.

04 13 24 23 LMP PRO. Let me ***

04 13 24 25 CDR *** 0, plus 2, minus 6.

04 13 24 30 CMP Hey, I have - I have you in the sextant; looking right up your descent engine. Fantastic!

04 13 24 36 CDR What do we go to? POO? Okay.
04 13 24 46 LMP Yes, I know it.
04 13 24 52 CDR Okay, MODE CONTROL, both ATT HOLD.
04 13 24 54 LMP ATT HOLD.
04 13 24 55 CDR *** residuals. What were they?
04 13 24 58 LMP I got them. Zero - -
04 13 25 01 CDR Zero?
04 13 25 09 CDR Did your AGS agree?
04 13 25 12 LMP *** Pete, with the ***
04 13 25 18 CDR Okay, but the point is, we don't trim; we don't need to lock on - -
04 13 25 21 LMP That's right.
04 13 25 22 CDR - - the rendezvous radar or anything.
04 13 25 23 LMP That's exactly right, Pete.
04 13 25 24 CDR So, your next thing is a VERB 82, ENTER.
04 13 25 36 LMP *** point 5 by 8.9.
04 13 25 44 CDR VHF A XMTR to VOICE RANGE.
04 13 25 47 LMP VOICE ***
04 13 25 48 CDR VHF B XMTR, OFF.
04 13 25 50 LMP XMTR, OFF. Going to -
04 13 25 53 CDR PROPELLANT QUANTITY MONITOR, OFF.
04 13 25 55 LMP PROPELLANT QUANTITY MONITOR, OFF. You did that?
04 13 25 58 CDR Yes. Pitch to 0, 109. Okay.
04 13 26 10 CDR 109.
04 13 26 11 LMP That's better than plus.

04 13 26 15 CDR Don't stop looking.

04 13 26 17 LMP You're still on VOX, Pete.

04 13 26 19 CDR Yes.

04 13 26 20 LMP Where it should be.

04 13 26 21 CDR Yes.

04 13 26 22 CMP Pete, I had my sextant on you, looking right up your tailpipe on your burn.

04 13 26 41 CMP Okay. Give me VHF RANGING, will you please?

04 13 26 44 LMP 48, ENTER; VERB 21, ENTER; 21112, ENTER; PRO; VERB 34, ENTER.

04 13 27 08 CDR Dick, that was really a super burn.

04 13 27 11 CMP Say again.

04 13 27 13 CDR That was really a super burn. Right on the money.

04 13 27 15 LMP You didn't give me a VERB 82, babe.

04 13 27 17 CDR Yes, I did. There it is, right there; 60.5 by 8.9.

04 13 27 21 CMP Okay. Give me a VHF RANGING, will you please?

04 13 27 23 LMP You're ...

04 13 27 24 CDR Okay.

04 13 27 26 LMP You got it.

04 13 27 27 CDR You got it.

04 13 27 41 CDR You got it, Dick?

04 13 27 42 CMP Yes, I've got it. I'm going to hot fire.

04 13 27 54 CDR Okay. Turn the lights down.

04 13 28 22 LMP Verify loose gear stowed, restraints attached. Okay.

04 13 28 31 CDR PCM, HIGH; BIOMED, RIGHT. Got the sequence camera?

04 13 28 36 LMP You've got it. The COAS goes in the overhead window. The sun got in my - -

04 13 28 42 CDR Man, there's the lunar surface.

04 13 28 46 LMP Going down to it, babe. ... slide that thing in there.

04 13 28 53 CDR I'm doing my best.

04 13 28 54 LMP I know it.

04 13 28 57 CDR ... enough.

04 13 28 58 LMP Hmm!

04 13 28 59 CDR What the hell is that?

04 13 29 01 LMP Where?

04 13 29 02 CDR ...

04 13 29 03 LMP That's the plug; they put them in there. Just slide it out.

04 13 29 06 CDR What is it?

04 13 29 07 LMP It's just a dummy plug.

04 13 29 11 CDR Well, that's groovy.

04 13 29 13 LMP ... electrical thingamajigs to get in here. You're supposed to put it - in back of the front window. You want to do it?

04 13 29 21 CDR Okay.

04 13 29 22 LMP You got to close up the slack.

04 13 29 24 CDR All right.

04 13 29 26 LMP That's so beautiful, Pete. Look there.

04 13 29 32 CDR I can't look out. I ain't going to look out.

04 13 29 46 LMP Leave the ... on. Anything I can do, Pete.

04 13 29 59 LMP You locked on with the rendezvous radar?

04 13 30 02 CDR No, why?

04 13 30 03 LMP I didn't know if - Well, you will be during ...

04 13 30 06 CDR I didn't need it for the other.

04 13 30 08 LMP I know it; I know it. I just didn't know what you were doing. What a machine! What a machine!

04 13 30 20 CDR That's it, pal. We're in the DOI attitude. 0 - 09 - -

04 13 30 26 LMP Zero. Target PGNS for PDI plus 12 abort.

04 13 30 29 CDR Okay. Here you go. ...

04 13 30 32 LMP Stay loose and I will.

04 13 30 34 CDR Need some times. Got that?

04 13 30 36 LMP Yes. Time, 110:32:04.70.

04 13 30 39 CDR 0, 1, 10 - -

04 13 30 41 LMP 32

04 13 30 46 CDR 00470. Get it. Go plus.

04 13 30 58 LMP 01169.

04 13 31 02 CDR Good show. ...

04 13 31 05 LMP Plus 01310.

04 13 31 09 CDR 310. Got you.

04 13 31 11 LMP Okay. And that'll give you about a 147 by 13, roughly.

04 13 31 17 CMP Pete, I have you in 60.49 by 9.0.

04 13 31 21 CDR Roger. I got 60.5 by 8.9, Dick. Very good. You tracking me in the sextant?

04 13 31 27 CMP Not yet; I'm just got - getting a 76.

04 13 31 30 CDR Oh, okay. I'm at the PDI attitude at this time. How much fuel I got left?

04 13 31 38 LMP You're so good, it's fantastic ...
04 13 31 44 CDR It's got to be; it's got to be. How about ...
04 13 31 55 LMP Okay, 146; that's good; 13, that's good enough.
04 13 32 00 CDR Forget it; we ain't doing that one. Hope not.
04 13 32 08 LMP Okay. What's next?
04 13 32 11 CDR DOI postburn report; helmets and gloves on; CABIN REPRESS, CLOSE; SUIT GAS DIVERTER, EGRESS --
04 13 32 17 LMP Pete, you ought to move the ... That thing could fall off there and hit your DSKY, now. You ought to put it somewhere else.
04 13 32 24 CDR You can take and put it away, for all I give a --
04 13 32 26 LMP Except I can't.
04 13 32 37 CDR Now, that's complicated.
04 13 32 39 CMP Boy, are you moving across that surface.
04 13 32 42 CDR Here ... Yes, I can tell we're going down, ... hear that thing.
04 13 32 48 LMP Put it in - put it over in there, Pete, in one of those bags. Your own bag or something like that; get it later.
04 13 33 15 LMP I guess when we get down to it, I ought to do that same thing to mine.
04 13 33 19 CDR Well, let's don't.
04 13 33 20 LMP What's the trouble?
04 13 33 21 CDR Why?
04 13 33 23 LMP What?
Okay. Here, grab it like this. Okay.
04 13 33 38 LMP Okay, now you got that clock counting up or down or something?

04 13 33 40 CDR Man, it counts any which way.

04 13 33 42 LMP You ought to get - -

04 13 33 43 CDR What was the PDI time?

04 13 33 45 LMP PDI time. Let me give it to you, babe. 110:20:37.

04 13 33 50 CDR 110:20, 110:20. Another 20 minutes plus 6 minutes. We'll be 35 in a minute, so that would be 25 and 20, 45. Put 45 in there. No, no, no, no. I goofed it. Put 15 in there. We're going to count now. Okay. That's it. Now, I'll tell you when. Not - no, no. Your time's got to go to 35 seconds. It's got to get to 35:37. And I'm watching. Okay?

04 13 34 26 LMP Yes.

04 13 34 8 CDR I need another shot of cold.

04 13 34 32 LMP Okay. Another shot of cold water coming out of the pitcher. It's too little; it's liable to come in too strong, babe. Look at this suit drip. Man - -

04 13 34 43 CDR When do we get acquisition?

04 13 34 44 LMP We got it right here.

04 13 34 47 CDR 109:43, huh?

04 13 34 49 LMP Nine minutes.

04 13 34 50 CDR Okay. Man, Dick, we're in the PDI attitude which is heads down going forward, right now, and it looks like that we're taking a big dive to the lunar ...

04 13 35 01 CMP Yes, I understand. I can watch it.

04 13 35 06 CDR Did you see that engine burn?

04 13 35 08 CMP Yes.

04 13 35 13 CDR All the pressure's good and everything?

04 13 35 14 LMP Yes, 35; just a second. I want to get it, but I ain't going to put that in the clock. I'm right-handed.

04 13 35 19 CDR That's all right. Forget it.

04 13 35 20 LMP That's a good idea. ... think that'll do?

04 13 35 24 CDR That's all right. All those pressures okay?
SUPERCRT?

04 13 35 28 LMP Take a look at them.

04 13 35 29 CDR ...? ...50?

04 13 35 39 LMP ... okay.

04 13 35 43 CDR You like the way it looks, old shoe?

04 13 35 45 LMP Yes, sir.

04 13 35 50 CDR I might as well go get the mode II.

04 13 35 53 LMP I don't know. I don't want th - -

04 13 35 54 CDR Yes! ...

04 13 35 56 LMP I don't want to do that.

04 13 35 57 CDR You don't want to do that now?

04 13 35 58 LMP No ...

04 13 36 00 CDR You got the clock counting up?

04 13 36 02 LMP 45 minutes - 35 minutes - -

04 13 36 08 CDR What time did you say the time was, TPI? 110:20.
You going to have to fold that over. Lift it up
by the camera. Other camera's in here.

04 13 36 23 LMP ... didn't roll good enough. You've got to roll
it. ... that thing roll.

04 13 37 18 CDR Okay.

04 13 37 22 LMP Just wait until you see the Snowman, Pete, babe.

04 13 37 36 LMP ... the burn.

04 13 37 39 CDR Yes ...?

04 13 37 42 LMP Yes.

04 13 37 44 CDR Let me have it. I'll get - -

04 13 37 46 LMP Hold that; hold this, Pete.

04 13 37 54 CDR We're really ... this descent water, though. Look at it - 85 percent, right now.

04 13 38 03 LMP ... get up a little higher. Here we go, ... that baby away.

04 13 38 14 CDR Yes.

04 13 38 15 LMP Sure don't need something else.

04 13 38 17 LMP Got her?

04 13 38 18 CDR Yes.

04 13 38 19 LMP 110:20:37. Okay, it's going to be 38, so 38 from 60 is 22. Where can I put these - don't forget to put these - -

04 13 38 29 CDR ... compartment.

04 13 38 37 LMP 32.

04 13 38 39 CDR Huh?

04 13 38 40 LMP Okay. We won't - we have to get this oxygen right anyway, Pete. ... them. Okay, now what do we got - -

04 13 38 48 CDR ...!

04 13 38 50 LMP Sequence camera. I've got that son of a gun set so good, it'll ... Let's start it now at the proper moment.

04 13 38 56 CDR Why don't you go ahead and button this up? CABIN REPRESS, CLOSE?

04 13 39 01 LMP ..., down, but that's okay. CABIN REPRESS, CLOSE? Then what? EGRESS?

04 13 39 08 CDR SUIT GAS DIVERTER, EGRESS.

04 13 39 11 LMP SUIT GAS DIVERTER, EGRESS. Okay?

03 13 39 15 CDR CABIN GAS RETURN, EGRESS.

04 13 39 17 LMP CABIN GAS RETURN, EGRESS.

04 13 39 19 CDR CABIN REGs A and B, EGRESS.

04 13 39 23 LMP There you go, baby.

04 13 39 24 CDR UPDATA LINK switch to DATA. Just as soon as we get those, we need - We get them in 12 more minutes.

04 13 39 34 LMP ...

04 13 39 35 CDR As a matter of fact, we ought to see them come up ...

04 13 39 38 LMP Yes. Watch this, Pete.

04 13 39 39 CDR Huh?

04 13 39 44 LMP You got that in?

04 13 39 45 CDR Yes, sir.

04 13 39 46 LMP Okay. We're standing by to do that. Hey, what's our pitch attitude?

04 13 39 51 CDR 109.

04 13 39 52 LMP 109. It's about 14 to minus 2.

04 13 39 57 CDR That's what I've got. I'm watching for him to come up on - I mean the horizon. I can see earthrise.

04 13 40 04 LMP I wish I could shoot that shot; it would live forever in the annals of our own personal good will. Coming up to PDI.

04 13 40 13 CDR ... anything ... that in ...

04 13 40 15 LMP ... do that. Become famous for this. Okay, just a minute. ..., right here.

04 13 40 40 CDR I didn't write down the AOS time, did you?

CONFIDENTIAL

04 13 40 44 LMP You wrote it down, Pete. You already got it on that other page. What the hell's the difference? It gets light here in a minute. We can see it come up.

04 13 40 54 CDR 43:30 - -

04 13 40 56 LMP Can you hear us, Dick?

04 13 40 58 CMP Yes, I can hear you.

04 13 41 00 LMP You know, it doesn't look any closer to me down here than it does at 60 miles. I frankly can't tell the difference.

04 13 41 09 CMP Well, you're not that close yet, are you?

04 13 41 11 LMP Maybe that's it. Heck, I don't know.

04 13 41 13 CDR I don't imagine we've come down more than 5 or 6 miles.

04 13 41 19 LMP I'll look at it right now. The AGS thinks we're 50.

04 13 41 27 CDR Fifty miles?

04 13 41 28 LMP Yes.

04 13 41 29 CDR The AGS thinks we're 50 miles, Dick.

04 13 41 35 LMP Take this picture and be famous forever. It's better than when you grab the Surveyor by all of its pricks. These photos accumulate. Everything tucked away; anything going to fall on our head. I have to go to INVERTER 1 some day. Did you check out those good things I did?

04 13 42 05 CDR S-BAND ANTENNA is FORWARD, right?

04 13 42 07 LMP Check out the good things I did - you did - we did.

04 13 42 10 CDR All right. COAS is to the overhead window; DOI postburn report was good; helmets and gloves are on; CABIN REPRESS is CLOSE; SUIT GAS DIVERTER to EGRESS, EGRESS; CABIN REGs A and B, EGRESS; and we're standing by for the UPDATA LINK switch. Going to get earthrise in just a second. You ought to have earthrise by now, Dick.

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04 13 42 35 CMP Not yet. I haven't yet. I'm looking backwards.
04 13 42 40 CDR Oh, that's right; I forgot.
04 13 42 51 CDR Going to be at 109:46:30. Going to be right straight out there or what? I wonder.
04 13 43 01 LMP I'm kind of guessing it is. It may be another - Yes, there it is; 15-degree inclination. I just always imagined it was right in front of us.
04 13 43 17 CDR Fifteen more seconds.
04 13 43 23 LMP Hey!
04 13 43 24 CDR Huh?
04 13 43 27 LMP I thought I saw it coming up.
04 13 43 30 CDR All right; 30 seconds.
04 13 43 33 CDR There it is! Look at it! Gosh darn! ... just click them off. Oh, that is fantastic!

TIME SKIP

04 15 41 55 CMP Hello, Houston; Yankee Clipper here.
04 15 42 00 CC Yankee Clipper, Houston. Go.
04 15 42 02 CMP Okay, if you'll kill my tape for me, I'll get the TV off.
04 15 42 07 SC It's done.
04 15 42 10 CC ...

TIME SKIP

04 18 50 54 LMP Roger.
04 18 51 21 LMP Roger. See you next pass.

DAY 6

05 11 25 48 CMP Hello, Houston; Yankee Clipper.
05 11 25 58 CMP Good morning. On the Yankee Clipper, reveille's been held; we've swept down fore and aft; the batteries are all charged, the crew is ready for work, and Yankee Clipper's reporting for duty, sir.

05 11 26 20 CMP Good, good.

05 11 26 31 CMP That's affirmative.

TIME SKIP

05 14 09 51 CC Roger. We copy that, Al.

05 14 14 23 CMP Houston, Clipper. Do you have your P22 information?

05 14 14 42 CMP Houston, Yankee Clipper.

05 14 15 05 CMP Roger. Do you have your ...?

05 14 15 18 CMP Do you have your P22 information?

05 14 15 27 CMP Houston, Clipper.

05 14 15 56 CMP Yes.

05 14 17 23 CMP Houston, Yankee Clipper.

05 14 17 50 CMP Houston, Yankee Clipper.

TIME SKIP

05 17 42 46 CMP Blue, green.

05 17 52 25 CMP (Humming)

05 17 54 36 CMP ... 8.

TIME SKIP

05 22 27 53 CDR VERB 25, ENTER. Plus 0014.2.

05 22 27 59 LMP Wait, wait, wait, wait.

05 22 28 00 CDR No, you're running. Plus 0014.3.

05 22 28 05 LMP Three. 1?

05 22 28 07 CDR That's right. And 050 --

05 22 28 12 CDR/LMP 05060.

02 22 28 15 LMP That's it, babe.

05 22 28 16 CDR Okay. Okay. When do we lose the high gain?

05 22 28 26 LMP Just a few seconds. Houston, Intrepid. We're going to go over to OMNIs now.

05 22 28 35 LMP There's PCM in LOW.

05 22 28 37 CDR Down.

05 22 28 39 LMP Antenna -

05 22 28 52 CDR That's good.

05 22 28 55 LMP I was glad I reminded them. S-band --

05 22 29 05 CDR Roger-Roger.

05 22 29 09 CDR Okay.

05 22 29 11 LMP Excuse me, Pete.

05 22 29 12 CDR Now - now, I need the TPI time, minus - TPI time.

05 22 29 20 LMP 144 - 38.

05 22 29 27 CDR Roger. 46.5. Just write it anywhere.

05 22 29 32 LMP Okay.

05 22 29 33 CDR Okay. Now. 144:38 --

05 22 29 37 LMP 38, 00.

05 22 29 40 CDR Okay. ENTER. All zips.

05 22 29 43 LMP Okay.

05 22 29 44 CDR And we're on our way.

05 22 29 46 LMP ... plus 19.

05 22 29 49 CDR We are on our way. Want to get a clock countdown there?

05 22 29 53 LMP Okay, if you'll do that, I'll get one of these marks in I've heard so much about.

05 22 29 58 CDR (Laughter) I'll get the clock. Go ahead.

05 22 30 01 LMP VERB 83; did you set ORDEAL?

05 22 30 04 CDR Okay, VERB 83 - Okay. Say again our AOS time?

05 22 30 21 CDR 143:16, by-by.

05 22 30 28 LMP Okay; 415 plus 10 000; 31 - -

05 22 30 40 LMP LOW.

05 22 30 45 LMP Okay, Pete. When this thing drifts through there, I'm going to punch an ENTER.

05 22 30 49 CDR ENTER.

05 22 30 50 LMP Six degrees, there you go.

05 22 30 52 CDR CLEAR. Now, I need a range, which happens to be 186.

05 22 30 57 LMP 316 plus 01860.

05 22 31 02 CDR ENTER. Can I do this?

05 22 31 09 LMP What is it?

05 22 31 10 CDR Oh, yes, sorry.

05 22 31 11 LMP Okay, I had it.

05 22 31 13 CDR On my mark.

05 22 31 14 LMP Okay. We're on the schedule here.

05 22 31 16 CDR Six more minutes - which will be 24. We're right on it.

05 22 31 18 LMP Okay.

05 22 31 22 CDR Hey, that was a beautiful alignment.

05 22 31 25 LMP We can do it, babe (laughter).

05 22 31 27 CDR I'm just sorry that damned thing stuck.

05 22 31 29 LMP You'd never know I hit it three times and it didn't, and, all of a sudden it just did, when I was up there doing the other.

05 22 31 33 CDR That's okay. I backed off 32 feet, that's all. Cost us a little gas. So I got interested - I had to stop and think, "What did it mean?"

05 22 31 41 LMP I need to check the R-dot.

05 22 31 43 CDR And I went right through that 100 feet per second, that's all.

05 22 31 45 LMP What's that R-dot?

05 22 31 47 CDR R-dot? 288, 288.

05 22 31 55 LMP There you go.

05 22 31 56 CDR What straps are holding you down? All of them?

05 22 31 58 LMP Yes. What ...

05 22 32 03 CDR You got this thing back in EGRESS - in EGRESS again?

05 22 32 04 LMP Yes, sir.

05 22 32 05 CDR Something smells terrible in here. You notice that?

05 22 32 07 LMP Probably in this - probably all this stuff flying this around, maybe.

05 22 32 12 CDR Well, but the suit loop's buttoned up.

05 22 32 13 LMP Yes.

05 22 32 15 CDR It smells like ammonia.

05 22 32 18 LMP I don't smell it, and I got a real good sniffer.

05 22 32 21 CDR Okay.

05 22 32 22 LMP Okay, I'm going to go ahead and take her - a mark here and get on this schedule.

05 22 32 25 CDR Yes.

05 22 32 26 LMP 415 plus 10 000. ENTER. 80 - -

05 22 32 33 CDR Hey, Clipper.

05 22 32 35 LMP 280 - -

05 22 32 36 CDR We're smoking right along; it looks like - -

05 22 32 37 LMP 50 - -

05 22 32 38 CDR - - we got a good solution. Tell you what happened to us there. Al went to close the main shutoffs and system A indicated barber pole, and I started to do something with him and I didn't shut off the ascent engine and we smoked - overburned about 32 feet, but I backed it all out and looks like we're nominal. What did they give us for a nominal CSI before? 49, right?

05 22 32 58 LMP Yes, 49.2. ... got a 46 - 503 and that's - minus 273; 5030 - -

05 22 33 09 CDR Look, is our recorder off?

05 22 33 10 LMP - - 27330. No, it's on.

05 22 33 14 CDR Okay.

05 22 33 17 LMP ...

05 22 33 18 CDR Well, tell you; we're bringing you a dirty, grubby spacecraft.

05 22 33 27 LMP MARK.

05 22 33 28 LMP 178, CLEAR, 316, plus 01780. I hope we make a good AGS solution here. Like to do it. CLEAR. 415, plus 10 000. Standing by to make the next set of marks. Okay, Pete. Things are looking good. Man, it was spectacular looking out. You should have seen that descent stage - that - all that jazz.

05 22 34 07 CDR I saw it.

05 22 34 09 LMP Did you? And then it - when we pitched over, I could see the descent stage like you said.

05 22 34 12 CDR Yes, I couldn't see it. That camera stopped. It would've been fantastic. I don't know when it stopped - -

05 22 34 18 LMP Son of a bitch!

05 22 34 19 CDR Pile of junk.

05 22 34 21 LMP Really pisses you off, doesn't it?

05 22 34 22 CDR It does, that's a fantastic thing to show somebody.

05 22 34 35 LMP 27. I'm going to take an R-dot right here. Clipper, that'd be 253, 254, 252, CLEAR, 503, minus 0, 2540.

05 22 35 17 LMP Two more marks and I'll get a look at a solution for you.

05 22 35 20 CDR Okay.

05 22 35 29 LMP ENTER. 173, 873 miles, 73 miles, CLEAR.

05 22 35 41 CDR What'd you do, break lock, Dick?

05 22 35 44 CMP ...

05 22 35 51 CDR Did you see us lift off?

05 22 35 56 CMP Negative.

05 22 36 16 LMP Hey, ... See that? It is working.

05 22 36 20 CDR Okay.

05 22 36 31 LMP That main shutoff valve has done it again.

05 22 36 48 CDR I got to ask Dick something and see if he'll do something for me. Hey, Dick. Call me back when you got - have about 2 or 3 minutes.

05 22 37 01 CMP ...

05 22 37 02 CDR How about giving me a long count?

05 22 37 04 CMP Roger. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10; 10, 9, 8, 7, 6, 5, 4, 3, 2, 1. Over.

05 22 37 12 CDR Okay. Do you hear me okay?

05 22 37 13 CMP Yes. I hear you fine.

05 22 37 14 CDR Okey-doke. Is your ranging on?

05 22 37 16 CMP Yes. It's okay.

05 22 37 18 CDR Okay, babe.

05 22 37 19 CMP How's ... down there; I'm locked on again.

05 22 37 22 LMP 168.2, CLEAR, 503, minus 1682, ENTER. I did that wrong. I bombed that damn AGS right there.

05 22 37 44 CDR What did you do?

05 22 37 48 LMP I entered a RANGE instead of a RANGE RATE. Let me see what it says - let me see what it says. R-dot. See, bombed the hell out of it.

05 22 38 03 CDR Well, put it right back in again. It won't bomb it. Hurry. Put in - push a right RANGE RATE in.

05 22 38 08 LMP It won't work.

05 22 38 09 CDR Why?

05 22 38 10 LMP Watch it. It drives it way out; there's no way to bring it back. Just give me an update.

05 22 38 14 CDR All right. I can't do it right now.

05 22 38 16 LMP Whenever you can.

05 22 38 17 CDR All right, here, let's copy this down; 16.8 DELTA-H.

05 22 38 21 LMP Wait a second. 16.8.

05 22 38 25 CDR 58:11.

05 22 38 26 LMP 58:11.

05 22 38 28 CDR 37:59.

05 22 38 31 LMP Okay.

05 22 38 32 CDR PRO.

05 22 38 37 CDR 47.0.

05 22 38 38 LMP 47.0.

05 22 38 40 CDR Okay, Dick. My first solution is 47.0.

05 22 38 43 CMP Okay. Pete, ...

05 22 38 47 CDR Okay, my CSI - CDH looks like minus 7.9 and minus 8.3.

05 22 38 57 CDR Okay, we're counting.

05 22 38 58 LMP Okay.

05 22 38 59 CDR Okay, I'll look-see.

05 22 39 07 CDR Where'd that - O VERB 90 at 15. Okay.

05 22 39 09 LMP Give me - give me an update, would you? Just a second; just a second.

05 22 39 15 CDR HIGH BIT RATE. What a dope!

05 22 39 19 LMP Okay, go. If we start new, maybe I can do better.

05 22 39 29 CDR All right. I can't hardly tell the difference between one-sixth g - -

05 22 39 40 CMP Okay. Sounds good. I'll be working on out-of-plane here for you.

05 22 39 48 CDR Okay, Dick. You say you're working on the out-of-plane? You're very garbled.

05 22 39 55 CMP Roger. Give me the CSI time again.

05 22 39 58 CDR CSI time, 143:01:50.60.

05 22 40 07 CMP Okay. I - I got my attitude.

05 22 40 21 LMP Can you look here, Pete?

05 22 40 38 LMP Do it right this time if it hurts. 162, ... Son of a bitch, beat you yet, Going to get a ...

05 22 41 16 CDR Coming up on 20.

05 22 41 27 LMP Guess if we really did run it on AGS alone, I'd have to do the charts right now.

05 22 41 50 LMP VERB 67.

05 22 42 03 CDR Okay.

05 22 42 04 CMP Hey, Pete, your out-of-plane is plus 1.8 feet per second.

05 22 42 09 CDR Okay. Well, forget it.

05 22 42 39 LMP 59, CLEAR, 6 plus 0, 590. Hit her.

05 22 42 51 CMP And I had to circle ... AUTO ...

05 22 42 54 CDR How much?

05 22 42 56 CMP A third of a mile.

05 22 42 58 CDR A third of a mile?

05 22 42 59 CMP That's affirmative.

05 22 43 00 CDR Okay. You're very garbled.

05 22 43 09 CMP How do you read me now?

05 22 43 11 CDR Just a little bit better, but you're still --

05 22 43 12 LMP Check RCS, EPS, and the whole smash.

05 22 43 14 CDR -- garbled.

05 22 43 15 CMP ...

05 22 43 18 CDR Okay.

05 22 43 20 LMP Hey, why are we using so much system B?

05 22 43 23 CDR Probably because that's what we're on.

05 22 43 26 LMP Okay.

05 22 43 27 CDR We're on - we're on 11.

05 22 43 31 LMP Are we in the right DAP, you suppose?

05 22 43 34 CDR System B. I'll switch it. Can't switch it?

05 22 43 40 LMP ...

05 22 43 42 CMP ..., Pete.

05 22 43 46 CDR You're hard to read, Dick, babe.

05 22 43 50 CMP What did you have after CSI?

05 22 43 52 CDR It had 46.5, Dick.

05 22 43 58 CMP It did?

05 22 44 27 LMP Where'd we go?

05 22 44 28 CDR Huh? Oh, no, I just let it - I'm flying it. I was just trying to save some gas.

05 22 44 39 LMP Yes, well, we're off ... Wonder why it's using so much.

05 22 44 45 CDR I don't save a hell of a lot of gas. That system was low when we started.

05 22 44 57 CDR I'm going to go back into AUTO here.

05 22 44 58 LMP I think the thing to do - I think one of the things we might want to do --

05 22 45 02 CDR I'm in the 1-degree deadband.

05 22 45 17 LMP Bugs me.

05 22 45 22 CMP I'm ... in ... 38.8 ...

05 22 45 29 CDR How much, 48.8?

05 22 45 32 CMP 38.8.

05 22 45 33 CDR 38.8. That's not very good, Dick.

05 22 45 39 CMP Just a minute ... there.

05 22 45 48 CDR We - we agree almost exactly with the ground.

05 22 46 34 LMP DPS and ECS; CPS and ECS. What a dope.

05 22 47 16 CDR You're sure doing a lot of thinking. Forget it. I show 0.26 miles out-of-plane, Dick, and minus 0.4, so I'm going to forget them.

05 22 47 38 CMP Got that.

05 22 47 41 CDR Hey, I'm going to let this go to 8 minutes.

05 22 47 44 LMP Okay.

05 22 48 06 CDR I was dumbhead for letting that son of a bitch overspeed, wasn't I?

05 22 48 10 LMP Both of us were dumbheads.

05 22 48 13 CDR Huh?

05 22 48 15 LMP Both of us - -

05 22 48 16 CDR Hey, that was a no-sweat. You know that?

05 22 48 18 LMP Sure, it was a no-sweat.

05 22 48 19 CDR And you know what we should have done - -

05 22 48 22 LMP We should have briefed for just that.

05 22 48 25 CDR All you had to do was close them anyhow and leave that crossfeed open.

05 22 48 29 LMP But I said - You didn't hear me say it?

05 22 48 30 CDR Yes. I - I just freak. That's me - I freaked up. I should have left you alone over there and stayed on my own business. My fault.

05 22 49 19 CDR Turn the floods down a minute.

05 22 49 20 LMP Just a second, Pete.

05 22 49 32 LMP Boy, is that him?

05 22 49 36 CDR Got a goddamn star out there.

05 22 50 26 CDR We're not in bad shape. What have we got? 80, 66.

05 22 50 41 CDR Tell you what, if you want to even them up, we can crossfeed during this burn.

05 22 50 45 LMP Okay.

05 22 50 54 CMP ...

05 22 50 57 CDR Darn it, Dick, you're unreadable. Say again.

05 22 51 01 CMP Loud and clear. I was just ... to Houston, right now.

05 22 51 04 CDR Oh, okay. You got a flashing light on or anything?

05 22 51 13 CMP No. I've got the overhead EVA lights and the rendezvous lights on.

05 22 51 17 CDR And we're still 150 miles away or something.

05 22 51 23 LMP Give me an R and R-dot, would you, Pete, in 10 minutes?

05 22 51 26 CDR R and R-dot in 10 minutes - -

05 22 51 27 LMP That's right.

05 22 51 28 CDR Okay. R's going to be - -

05 22 51 34 LMP Hey, I like this.

05 22 51 36 CDR Yes. R-dot's going to be 1 - Let's see, it's going to be 71; no, it might be 70.

05 22 51 48 LMP Well, let's hope the old probe works.

05 22 51 51 CDR MARK.

05 22 51 52 CDR 148.2 at 70 feet per second.

05 22 51 57 LMP I'm doing it. I've got a ... - 70, 76.

05 22 52 01 CMP Okay, Pete. I got 45.9 feet.

05 22 52 06 CDR 45.9. That sounds a lot better. Okay.

05 22 52 13 CMP ...

05 22 52 16 LMP Okay. I'm going to final COMP in one more mark; just a second; it's coming up now.

05 22 52 24 CDR That'd be 44.9 converted.

05 22 53 03 LMP I get 45 - 45.0 off the chart.

05 22 53 09 CDR Okay.

05 22 53 15 LMP That's not too bad.

05 22 53 16 CMP Al, am I supposed to maneuver?

05 22 53 18 LMP What? Yes, go ahead and maneuver.

05 22 53 21 CDR Maneuver yourself --

05 22 53 22 CMP Okay.

05 22 54 48 CMP How you're doing?

05 22 54 57 CMP How you guys doing down there?

05 22 55 14 CDR Hey, should we be on some other antenna?

05 22 55 18 LMP FORWARD.

05 22 55 20 CMP ...

05 22 55 21 CDR Oh, okay. Very good. I'm about to lose my radar on you.

05 22 55 33 LMP Do you mind if I have NOUN 85 back?

05 22 55 36 CDR I don't mind a bit, if that's what you need.

05 22 56 06 LMP Pretty full one.

05 22 56 16 CDR Why, you want to crossfeed?

05 22 56 19 LMP Yes.

05 22 56 21 CDR Open the crossfeed.

05 22 56 23 LMP Close system B.

05 22 56 25 CDR Close system B.

05 22 56 26 LMP Now, just hope like hell system A is really and truly on. Let's watch these pressures.

05 22 56 46 CDR How you read me, Dick? Okay?

05 22 56 48 CMP Loud and clear, Pete.

05 22 56 49 CDR All right. Five minutes to the burn.

05 22 56 51 LMP Okay.

05 22 56 52 CMP Okay.

05 22 57 03 CDR Boy, I really like to watch those thrusters fire out there. That's neat-o. When do we - when do we come out in the sunrise?

05 22 57 14 CMP Right after - right after we see the Sun.

05 22 57 17 LMP Okay. I'm not so mad at myself anymore.

05 22 57 20 CDR Why?

05 22 57 21 LMP I've written those down, and I solved this thing.

05 22 57 23 CMP ... for my P56.

05 22 57 27 CDR Say again.

05 22 57 28 CMP ...

05 22 57 32 CDR 45.3, is that right, Al?

05 22 57 34 LMP That's right, 45.3.

05 22 57 38 CMP That's a plus 45.3. zips in, huh?

05 22 57 42 CDR That's right. I think you got to add one to it or something. I know we have to subtract one from yours.

05 22 57 47 CMP I already did.

05 22 57 48 CDR Not bad. ... - -

05 22 57 50 CMP ... on mine, though.

05 22 58 43 LMP Three minutes to the burn in 7 seconds.

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05 22 59 01 CMP How are - You look about half a degree.

05 22 59 03 CDR Oh, yes. We're all set to go. No sweat, it says here in fine print.

05 22 59 13 LMP I did the DELTA DELTA-T and got 45.1, by using the DELTA DELTA-T thing.

05 22 59 20 CDR Not too bad for a dope.

05 22 59 22 LMP I'm going to do better next trip.

05 22 59 25 CDR Well, you been lonely without us?

05 22 59 28 CMP Well, just a little bit. I've been cleaning up for you.

05 22 59 34 CDR Man, we're going to dirty it up, pal. I'll tell you, we'll do our best, but we are filthy. I don't really think it's that bad, though. Most of it will stay in the LM.

05 22 59 48 LMP I hope to heck it does.

05 22 59 50 CDR Okay, Dick, 2 minutes to burn.

05 22 59 52 CMP I hear you.

05 22 59 57 CDR I see your flashing light out there, now.

05 23 00 07 CDR No, I don't either.

05 23 01 31 CMP Hey, are you guys burning?

05 23 01 51 CMP Are you going to burn, Pete?

05 23 02 03 CMP How are you doing?

05 23 02 14 CMP How are you doing?

05 23 02 18 CMP ...

05 23 02 39 CMP How's it going?

05 23 04 09 CDR Hello, Dick. How do you read? Over.

05 23 04 11 CMP Loud and clear.

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05 23 04 12 CDR Okay. Now, look, something's screwy on this COMM --
05 23 04 13 LMP Burn's complete.
05 23 04 14 CDR Burn's complete.
05 23 04 15 LMP We got the burn's complete.
05 23 04 16 CDR Our burn's complete. Our burn's complete.
05 23 04 19 CMP Okay, you're cutting in and out pretty bad. ...
05 23 04 23 CDR Say again.
05 23 04 24 CMP You're cutting in and out pretty badly.
05 23 04 27 CDR Okay. Now, look, I'm transmitting to you - Now, come on, God damn it.
05 23 04 30 LMP Look, let me get the COMM right. Do you want me to get the COMM right or not? Something's wrong with it. Okay. I'll just leave it like it was.
05 23 04 39 CDR Just - just all I want to do - 521 alarm. What's that? Freaking son of a bitch.
05 23 04 46 LMP It's in your G&N --
05 23 04 47 CDR I got it, never mind. Could not read radar. All right. God - God damn, I know what the hell's the matter here.
05 23 05 11 CDR Now, he's got it. All right, will you write this number down?
05 23 05 18 LMP I sure will.
05 23 05 21 CDR Three, six, ... 144, all zips, 1.53, that's CSI time.
05 23 05 32 LMP Okay.
05 23 05 38 CDR Dick, how do you read?
05 23 05 40 CMP Loud and clear, now.
05 23 05 41 CDR I'll be goddamned if I know what's wrong with it. Stupid son of a bitch. All right, we're in sunlight. Our CS - CDH time is 144:00:1 --

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05 23 05 52 LMP 5.2.

05 23 05 53 CDR No. One second point 53. 1.53.

05 23 05 59 CMP Say it again. 1 point zero - -

05 23 06 02 CDR 00:01.53.

05 23 06 09 CMP What time do you want the ...?

05 23 06 14 LMP Just a second. I'll figure it out.

05 23 06 28 CDR What in Christ's name is this?

05 23 06 30 LMP How about - -

05 23 06 32 CDR What the hell happened to the RESET - the - We're not going back to 10 010, are we?

05 23 06 43 LMP Pete, do you want me to put 143:30 as the plane-change time?

05 23 06 47 CDR That's fine, if that's what it's supposed to be.

05 23 06 50 LMP Okay. Well, that's rounding off to the nearest - -

05 23 06 52 CDR Now, what happened to the damn - Hey, Dick, how about a plane-change time of 143:30? Over.

05 23 07 00 CMP That sounds good.

05 23 07 02 CDR Okay. That's the one. Oh, there it is. I'm looking on the wrong page.

05 23 07 25 LMP Okay.

05 23 07 31 CDR Boy, that COMM makes me mad.

05 23 07 34 LMP Does me too. That's why I wanted to try to figure it out there for you.

05 23 07 36 CDR No, but see, I got a PROGRAM alarm and a TRACKER LIGHT - -

05 23 07 41 LMP Okay.

05 23 07 42 CDR - - and a bunch of other crap.

05 23 07 43 LMP How about giving me an AGS update?

05 23 07 46 CDR Just 1 - -

05 23 07 47 LMP When you can.

05 23 07 48 CDR - - 1 second.

05 23 07 49 CMP Are you in ...?

05 23 07 51 LMP Yes, we are.

05 23 07 52 CDR Yes. Sure are, Dick.

05 23 07 55 LMP Now, look, I got the VHF in FORWARD and that's where we've been flying it, and it worked great. Only today, it ain't working so great. Why, I don't know.

05 23 08 02 CDR VERB 47, ENTER. There you go.

05 23 08 06 LMP Wait a second. Wait a second. Go.

05 23 08 21 CDR Hey, Dick, it never fails to do that. I'll be goddamned if I know. We're talking to you fine up until 1 minute, and then you can't hear me. Now, it could be that, when I'm burning, my thrusters are doing something that's blocking that VHF.

05 23 08 37 LMP The only trouble is, he goes out even before you start burning.

05 23 08 40 CMP ... too, Pete.

05 23 08 44 CDR But I think you and I have very poor COMM with one another today. I can hardly understand - understand you; you're so garbled. Hey, pull that thing to PUSH/CABIN and let me - I want to blow my ears a minute.

05 23 09 02 LMP I can't PUSH/CABIN be - -

05 23 09 04 CDR Well, yes, I go to ear. Never mind, stand up. I get it. I'm sorry. I'm asking you to do too much; you play with your AGS; I'll do it. I shouldn't get spastic over here, but that freaking PROGRAM alarm pissed me off. They come up in the middle of that thing.

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05 23 09 42 CDR Okay. Now. What time do we burn - CSI was 1 -
143:03, right?

05 23 09 58 LMP Yes.

05 23 09 59 CDR 01 - -

05 23 10 00 LMP No, let me tell you.

05 23 10 01 CDR So, you came up with a time of - for the plane
change, of - -

05 23 10 07 LMP 143:01:50. Okay. Then you told me CDH was going
to be 144:00:01.53, right?

05 23 10 14 CDR Yes.

05 23 10 15 LMP I subtracted 30 minutes and rounded it off to 140
and asked you 140 - -

05 23 10 19 CDR Okay.

05 23 10 20 LMP 330.

05 23 10 21 CDR Yes. Say, let me - let me just - let me just check
something.

05 23 10 31 LMP That's the wrong book.

05 23 10 53 LMP Do you want me to set your clock counting down?

05 23 10 56 CDR Yes. We got plenty of time. This is a long haul.

05 23 10 59 LMP Yes. I know it. This is a good one. Just trying
to get organized, here.

05 23 11 01 CDR Yes. Now, I'm - No sweat.

05 23 11 07 LMP This job is a son of a bitch, yet. Don't knock
the time; I've - I've set it for you.

05 23 11 19 CDR Oh, wait a minute. Wait. Go ahead.

05 23 11 21 LMP Okay. I'll be setting it in 8 seconds, 48:30,
counting down. Boy, that Sun is hot. You got
sort of stay out of the way, don't you? The other
... - -

05 23 11 32 CDR You ought to put my window heater back in. See what's happening, here, is we're running on CABIN - we're running on SUIT LOOP.

05 23 11 51 LMP That's right.

05 23 11 52 CDR If we want to - if we get out of this dumb EGRESS mode, we're not going to - Certainly the cabin isn't going to fail, now. We've been in and out - let's get. I'm in CABIN right now.

05 23 12 03 LMP No, you just went to CABIN. Here - -

05 23 12 05 CDR When you pull this - -

05 23 12 07 LMP PUSH/CABIN. There you go.

05 23 12 09 CDR Of course, we could screw up the - we could screw up the suit loop, couldn't we? If we - -

05 23 12 15 LMP Yes.

05 23 12 16 CDR - - don't follow this crap, and I'd better go back to EGRESS.

05 23 12 20 LMP We need those window heaters, though, just like you say.

05 23 12 22 CDR Yes. It's funny; the other guys never had to use them.

05 23 12 30 LMP Oh. We maneuvering somewhere, huh? No? Okay.

05 23 13 06 CDR There you go; that's - see that's the T_{ig} at CDH, 1.53. Okay.

05 23 13 12 LMP Yes.

05 23 13 36 CMP ... see you in the telescope.

05 23 13 41 CDR You - you see us in the telescope?

05 23 13 43 CMP Yes.

05 23 13 44 LMP ENTER, 136.5.

05 23 13 45 CDR Damn, Dick. Do you - I - I just don't know what in the hell is wrong with this VHF COMM. We should have super COMM. And I'll tell you, it really makes me mad.

05 23 14 12 LMP Hey, look at this book just a second.

05 23 14 13 CDR Okay.

05 23 14 14 LMP All right, I don't even know what I want to look at. I want to look at this - -

05 23 14 21 CDR When you did your P76, Dick, with my burn in it, did you get any NOUN 49's afterwards, or did it come right up with a good state vector?

05 23 14 30 CMP No. I got a good one. ...

05 23 14 38 CDR I can't understand you. God darn, you're garbled.

05 23 14 42 CMP So are you.

05 23 14 46 CDR Hey, Al, what's - Let's screw around with something over there. How about the VHF SQUELCHes or something? Why don't we try that?

05 23 14 57 LMP No, the SQUELCH only applies to us hearing him. And we always hear him.

05 23 15 01 CDR Well, he's got SQUELCH over there, too - -

05 23 15 03 LMP That's right, so he should screw with his. It doesn't have anything to do with our transmitter. Since we always hear him - -

05 23 15 08 CDR Yes. Well - -

05 23 15 09 LMP ...

05 23 15 10 CDR - - he's transmitting to us on what, A?

05 23 15 11 LMP He's coming to us on B.

05 23 15 13 CDR Okay. Okay. Okay, Dick, give us a count, will you?

05 23 15 17 CMP Roger. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

05 23 15 22 CDR Give us a longer one than that, Dick.

05 23 15 26 CMP 1, 2, 3, 4, 5, 6, 7, 8, 9, 10; 10, 9, 8, 7, 6, 5,
4, 3, 2, 1. Over.

05 23 15 41 LMP It's just bad, that's all.

05 23 15 48 CDR Man, oh man, it's taking a long time thinking this
over.

05 23 15 53 LMP I'll be with you in a second. ...

05 23 15 58 CDR When do we get AOS, pretty quick?

05 23 16 02 LMP AOS is due right - there.

05 23 16 07 CDR 16. Should be right now.

05 23 16 10 LMP FORWARD, verify COMM. What's our pitch attitude?
147?

05 23 16 17 CDR Pitch attitude is 145. Gosh, I think there is
something wrong with my CSI program - CDH program.
That baby has really been thinking.

05 23 16 28 LMP Sure you got the right numbers in there? You
could - -

05 23 16 30 CDR There's no numbers, you know, it just comes up with
it. There it is. Look at that. Dick, it shows me
17 mi - 17.1 mile DELTA-H, 38 minutes and 58 seconds
to DPI, and it's only a slip of - Well, it makes it
50 - No, it makes it 59 - -

[REDACTED]
DAY 7

06 00 26 13 CDR ... look at these.

06 00 26 15 LMP Hmmm.

06 00 26 18 CDR Hey, I see ...

06 00 26 21 LMP Yes, exactly. I'm not even thinking. I knew that, but I - -

06 00 26 25 CDR I thought you had some magic numbers you had to set it to.

06 00 26 29 LMP Gee, I wish I didn't ...

06 00 26 33 CDR In 9 minutes, we'll be right at 51.

06 00 26 38 LMP Okay.

06 00 26 40 CDR ... the difference.

06 00 26 41 LMP Yes.

06 00 26 43 CDR Right at the moment, it's not. Now, this time will change.

06 00 26 54 LMP Wait a minute.

06 00 26 56 CDR Okay, okay, Dick. 144:36:25.71. Got it?

06 00 27 05 LMP Yes.

06 00 27 06 CMP Okay, Pete. Thank you.

06 00 27 24 LMP What's my bit rate? We got it.

06 00 27 26 CDR ... bit rate. We got it.

06 00 27 35 LMP Okay, Pete, NOUN 81. 5.9 is very close to what they had.

06 00 27 47 CDR Well, we're within 1 foot per second of the ground, Dick. We're plus 25.9, minus 1.5, minus 11.9.

[REDACTED]

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06 00 28 05 LMP Right down the line of sight. You want the 59?
Probably not. Okay, now, let's get a clock. Turn
it at 56 - 2. Why don't I plot another point?

06 00 28 27 CDR Why don't you and I'll fly it for a while ... Okay?

06 00 28 31 LMP That's right; 20 degrees --

06 00 28 33 CDR Just a moment.

06 00 28 35 CDR All right. It's 48.

06 00 28 38 LMP Twenty degrees at 48.

06 00 28 46 LMP I think that's it.

06 00 28 49 CDR Huh?

06 00 28 52 LMP Right on - right on the spot, Pete.

06 00 28 55 CDR Okay.

06 00 28 56 LMP All right, ... here.

06 00 29 08 CDR You want a NOUN 86?

06 00 29 10 LMP Yes. You got it?

06 00 29 12 CDR Yes. It's coming in; just a minute.

06 00 29 19 CDR Hey, Clipper, here's the ... for you. ..., will
you?

06 00 29 23 CMP Say again.

06 00 29 24 CDR Do you need NOUN 81? NOUN 81. Read him NOUN 81,
will you, Al?

06 00 29 30 LMP All right. NOUN 81 is 25.9, minus 1.5, minus 11.9.

06 00 29 42 CDR ...

06 00 29 43 CMP Copy plus 25.9, minus 1.5, minus 1.9. Is that
correct?

06 00 29 47 LMP That's minus 11.9.

06 00 29 52 CMP Minus 11.9. I agree.

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06 00 29 54 LMP 11.9, okay.

06 00 29 57 CMP ... point zero, plus 1.7, plus 7.1.

06 00 30 03 CDR Good.

06 00 31 08 CDR Want to plot another point?

06 00 31 10 LMP Yes, let's do.

06 00 31 14 CDR I'll give you a call at 44 miles. All right?

06 00 31 20 LMP Looking for 44 miles - -

06 00 31 21 CDR 44 -

06 00 31 22 CDR MARK.

06 00 31 24 LMP ... 1.8.

06 00 31 27 CDR Say, Dick, we just passed 5 minutes.

06 00 31 31 CMP Right on, Pete, babe.

06 00 31 33 CDR Okay.

06 00 31 48 LMP ... 55 ...

06 00 32 41 LMP 51 minus 000.9 ... 52.

06 00 33 25 CDR Three minutes, Dick.

06 00 33 28 CMP Okay.

06 00 33 39 CDR How did you do on your S0 158?

06 00 33 42 CMP Excellent.

06 00 33 44 CDR I ... my signal strength's - fallen.

06 00 33 48 CMP Is that ... pressure down?

06 00 33 51 CDR No, okay.

06 00 34 28 CDR Just passed 2 minutes.

06 00 34 33 LMP ...

06 00 34 36 CDR Boy, I'm going to tell you, when I get back from this flight, I'm going to be super shoulders after this suit.

06 00 34 42 LMP My shoulders are so sore I can't believe it.

06 00 35 30 CDR Just a little less than 1 minute, Dick.

06 00 35 33 CMP Roger.

06 00 35 36 CDR Everything looks very good over here.

06 00 35 39 CMP Okay, I'm all set here, too.

06 00 35 40 CDR Forty-five seconds.

06 00 35 53 CDR DSKY's blank; average g.

06 00 36 05 CDR Twenty seconds.

06 00 36 15 CDR Ten seconds.

06 00 36 25 CDR Burning.

06 00 36 31 CDR Going well. Very good.

06 00 36 44 LMP Looks good, Pete.

06 00 36 45 CDR Huh?

06 00 36 46 LMP You're looking good.

06 00 37 00 CDR Okay, the burn's complete, Dick.

06 00 37 03 LMP Minus 3, minus 1 - -

06 00 37 04 CDR Wait, wait, wait, wait.

06 00 37 06 LMP All right. ...

06 00 38 02 CDR We're looking good, we're at P35 - Everything's going well. You got that probe extended?

06 00 38 11 LMP Yes, sir.

06 00 38 13 CDR Let's hope it works (laughter). Keep it coming.

06 00 38 54 CDR I know why that window froze up.

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06 00 38 58 LMP Why's that?
06 00 38 59 CDR We're in EGRESS.
06 00 39 01 LMP Okay.
06 00 39 31 CDR Boy, I wish we had a bottle of gin aboard that spacecraft.

MUSIC

06 00 40 14 CDR Crazy!
06 00 40 29 CDR Beautiful. Al and I are dancing.
06 00 40 32 LMP Play it just a little more, Dick, and I'll . . . --

MUSIC

06 00 40 46 CDR It's not too bad, now; say something to us, Dick.
06 00 40 51 CMP ...
06 00 40 52 LMP No, no. Try all the settings. You know the - it works . . . - This is where it works going down - right there.
06 00 40 58 CDR Yes. I'll leave it right there. It really is annoying, isn't it?
06 00 41 03 LMP It sure is. ...
06 00 41 11 CDR ...
06 00 41 21 LMP I'll track for you a little bit.
06 00 41 23 CDR All right, that's good. Six minutes, I get this.
06 00 41 29 CDR ... that good old cabin interior.
06 00 41 42 CDR ... graduate it up to the big engine category - -
06 00 41 46 CMP I'm sorry, old chap, but you just don't have a light.
06 00 41 51 CDR I - Yes - They confirmed that we could be burning and - and - I mean be drawing the right current but not have a light.

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06 00 42 01 LMP Well, I'm not sure it can.

06 00 42 04 CMP ... , Pete, I don't see it.

06 00 42 09 CDR You boresighted yet?

06 00 42 10 LMP Yes, I'm boresighted at 34 degrees at 29-1/2.

06 00 42 14 CDR Hey, you remind me - or, Dick, you remind me, when I get in in front of you and everything and we're ready to dock --

06 00 42 21 LMP ... and 29 --

06 00 42 22 CDR -- remind me to go to my inertial ball.

06 00 42 24 LMP -- 33 and 29. 33 and 29. Okay.

06 00 42 27 CDR Just went ORB RATE.

06 00 42 28 LMP 33 -

06 00 42 30 CMP What do you want to do now, Pete?

06 00 42 32 CDR To go to my inertial ball, I'm on ORB RATE, now. That may have been why Neil and those guys got gimbal lock, although I ...

06 00 42 45 IMP ... just right - ... 28.5 ... clear. ...

06 00 43 23 CDR Okay, how about --

06 00 43 24 LMP I'll give you a minute. ... here. ... loaded, 44.5 at 27, a little over 26.

06 00 43 53 CDR Right on the money on line of sight, babe.

06 00 43 55 LMP ...

06 00 44 08 CDR You cannot take your hands off this baby at all.

06 00 44 11 LMP You sure can't, Pete. Get right on that one, no ...

06 00 45 00 CDR You know, it really is a shame that you can't fly more.

06 00 45 05 LMP That's right. You could do it.

06 00 45 06 CDR You sure could. I'm just beginning to get the hang of this thing.

06 00 45 17 LMP ...? ... 10 minutes under the ...

06 00 45 23 CDR What's that?

06 00 45 24 LMP The ...

06 00 45 25 CDR ...

06 00 45 26 LMP I need it now, I need it now, I goofed.

06 00 45 28 CDR There you go.

06 00 45 29 LMP ... What do you want? ... 45. That's good.

06 00 45 32 CDR There.

06 00 45 33 LMP 36 - Thank you. ...

06 00 45 39 CDR ...

06 00 45 49 LMP ... try to go ... I'll have to make a check.
130.8 and CLEAR. NOUN 32, ...

06 00 46 02 CDR You're not trying to run the charts too, are you?

06 00 46 04 LMP No, but I can take down that data because -

06 00 46 06 CDR ...

06 00 46 07 LMP This AGS isn't worth a damn because it's so much work. I've been - Look how I've been working - like to go crazy over here.

06 00 46 11 CDR Yes, I know.

06 00 46 12 LMP I worked as fast as I could possibly work --

06 00 46 13 CDR Why don't you - why don't you just quit after this midcourse and relax and enjoy it?

06 00 46 17 LMP Watch the thing; it may be there.

06 00 46 19 CDR ... fly this vehicle.

06 00 46 20 LMP Forward ... plus 10. Okay, get a good boresight there ... You're on. ...

06 00 46 28 CDR Okay.

06 00 46 29 LMP ... 3.6 plus 00235.

06 00 46 36 CDR 235.

06 00 46 37 LMP 235. ...

06 00 46 39 CDR ... that's okay.

06 00 46 45 LMP You going over --

06 00 46 46 CDR Yes. When we get over in this area, I'm going to ... this ... check --

06 00 46 50 LMP Here?

06 00 46 51 CDR Yes. Yes. Hey, Dick, how about - how about a boresight, and I'll tell you where we are.

06 00 46 56 CMP Okay. You're right on - 39.5 at 22.5.

06 00 47 03 LMP 39.5 at 22.5. That puts us right - right there, Pete.

06 00 47 10 CDR Okay. I'm smoking right along, gang.

06 00 47 26 CMP ... back up ...

06 00 47 29 CDR Yes.

06 00 47 30 CMP ...

06 00 47 49 CMP Hey, guess what, gang; only got a hundred hours to go.

06 00 47 57 CDR Huh?

06 00 48 10 LMP ... up ... get to the clock. ...

06 00 48 14 CDR All right.

06 00 48 15 LMP ...

06 00 48 17 CDR Yes, B in AUTO.

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06 00 48 21 LMP ...
06 00 48 26 CDR Going to final COMP on midcourse number 1, Dick.
06 00 48 30 CMP Okay.
06 00 48 38 CDR That's minus 0.5, minus 0, plus 2.0.
06 00 48 44 LMP Wait, wait, let me write that down.
06 00 48 45 CDR Okay.
06 00 48 46 LMP Minus 5, minus -
06 00 48 50 CDR Zero.
06 00 48 51 LMP Zero, plus ... Okay, got it.
06 00 48 52 CDR Okay.
06 00 48 54 CMP Say them again.
06 00 48 55 CDR Say again?
06 00 48 56 CMP Say them again.
06 00 48 59 CDR Okay. Minus 0.5, 0, and plus 2.0.
06 00 49 56 CDR One and a half minutes to burn.
06 00 50 26 CDR One minute to burn. You read me, Dick?
06 00 50 30 CMP Loud and clear, Pete.
06 00 50 31 CDR Okay.
06 00 50 52 CDR DSKY's blank - average 8.
06 00 51 15 CDR Ten seconds.
06 00 51 25 CDR We're burning.
06 00 51 42 LMP There it is, all zeros. Did you call a NOUN 59?
06 00 51 46 CDR Not right at the moment.
06 00 51 47 LMP Okay.

06 00 51 50 CDR Where am I? There.

06 00 52 23 LMP Boy, I thought I had a lunar rock there, it's a piece of bread.

06 00 52 26 CDR (Laughter) Look at this screw floating around.

06 00 52 35 LMP ...

06 00 52 56 LMP ... 64. ... minutes ... - 60 -

06 00 53 06 CDR Man, that thing is right on the nominal line of sight, babe.

06 00 53 15 LMP ... have to take my helmet off.

06 00 53 18 CDR ...?

06 00 53 37 LMP ... if you got a ...

06 00 53 42 CDR Okay. Don't wander too far off attitude ...

06 00 53 45 LMP It's right on it, ... Okay, VERB 77, ...

06 00 53 50 CDR Okay.

06 00 53 54 LMP ...

06 00 54 05 LMP Go ahead.

06 00 54 07 CDR ...?

06 00 54 12 LMP Well, maybe I'm not ...

06 00 54 15 CDR Okay.

06 00 54 20 LMP ...

06 00 54 23 CDR Okay. ... in a minute.

06 00 54 30 LMP It's really a ...

06 00 54 32 CDR Here, let me give it VERB 76 again.

06 00 54 35 LMP We got 76.

06 00 54 40 CDR Just really shoots gas.

06 00 54 42 CMP Okay, I got you at 14 miles, Pete.

06 00 54 45 CDR That's what I got, 14 miles, Dick, about 103 feet per second.

06 00 54 50 CMP Very good.

06 00 54 51 CDR Say again?

06 00 54 52 CMP I said very good.

06 00 54 57 CMP I'm hoping I can get some optics ... out for daylight.

06 00 55 00 CMP Okay.

06 00 55 03 LMP Say, watch that.

06 00 55 04 CDR 144:59 at 5 minutes.

06 00 55 26 LMP ... get that - 54, 54 at 13 miles.

06 00 55 45 CDR ... get the ... out ...

06 00 55 48 LMP That's better, huh?

06 00 56 00 LMP Look at old ... The original one.

06 00 56 46 CDR ... OMNI, OMNI.

06 00 57 09 CDR 58 at 7 ...

06 00 57 43 CDR Ten miles, Dick.

06 00 57 46 CMP Okay.

06 00 57 51 LMP See that ... Take a look at the time, ...

06 00 57 57 CDR We ought to be coming right into daylight here, huh? Where's the tunnel?

06 00 58 02 CMP ...

06 00 58 04 CDR ... Oh, over here.

06 00 58 07 LMP Right there.

06 00 58 08 CDR Must be about 13.

06 00 58 11 LMP Yes.

06 00 58 36 CDR Got your flashing light loud and clear out there.

06 00 58 40 CMP Is that mine?

06 00 58 42 CDR Yes.

06 00 58 51 CDR That planet below Dick must be Mars.

06 00 59 06 CDR I'm cold; are you cold?

06 00 59 08 LMP Yes, damn cold.

06 00 59 09 CDR Pull that LCG circuit breaker.

06 00 59 31 LMP As soon as we dock, I'm going to get back up here.

06 00 59 34 CDR Yes. Very good.

06 00 59 49 CDR Okay. I'm on the foot scale now, Dick. You're 58 600.

06 00 59 57 CMP Okay. Starting to get daylight.

06 01 00 14 LMP See why ... up here.

06 01 00 37 LMP 73, 55. 76 now, that's ... on it. 76 and 55.
...

06 01 01 14 CDR There he is, he's started out into daylight.

06 01 01 20 LMP ... that's what I'd - Yes, ...

06 01 01 26 CDR It gets brighter and brighter and brighter.

06 01 01 35 CDR That's ... what?

06 01 01 39 LMP ...

06 01 01 41 CDR Yes. ... bunch.

06 01 01 45 LMP Shift canisters.

06 01 01 47 CDR I'll get it. ... need to do.

06 01 01 53 LMP That gage hasn't worked since day 1.

06 01 01 57 CDR ... gas.

06 01 02 00 LMP ... worth a darn. ... anyway. 70 - 71 degrees at 48 ...

06 01 02 22 LMP There you are, Pete - ... right here.

06 01 02 26 CDR Okay.

06 01 02 29 LMP Going to put your helmet back on?

06 01 02 30 CDR I'm - I will for docking, I'm not - -

06 01 02 31 LMP ...

06 01 02 33 CDR No. I will for docking, but I - it's going to be awful bright around it.

06 01 02 38 LMP I know it, okay.

06 01 02 39 CDR I damn near - panicked on the Agena.

06 01 02 42 LMP I remember ... don't want to miss this data thing right here.

06 01 02 49 CDR Okay. Gosh, look at the crap floating around in here. ...

06 01 03 17 CDR I have a suggestion ... that last one. I'll bet if you could ... you could use it a little bit in the simulator. Final COMP, Dick, on the last midcourse.

06 01 03 34 LMP Hey, Pete. We've made - -

06 01 03 36 CDR Who shut that canister? Look at that CO₂ gage.

06 01 03 43 LMP That registered zero since we started - -

06 01 03 45 CDR No, it hasn't. No, it hasn't, either.

06 01 03 46 LMP It has been ...

06 01 03 49 CDR Yes. Maybe so. That thing's zero now, and it went all the way to the top. Okay, Dick, I have minus 9, minus 3, and minus 0.7.

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06 01 04 07 CMP Minus 9, minus 3, and minus 0.7. Okay.

06 01 04 10 CDR You want to copy these?

06 01 04 11 LMP ... I'm sorry, Pete.

06 01 04 12 CDR All right.

06 01 04 13 LMP Go ahead.

06 01 04 14 CDR Minus 9, minus 3, and minus 7.

06 01 04 17 LMP Okay, 6 minutes.

06 01 04 37 LMP ... degrees.

06 01 04 39 CDR All right.

06 01 05 25 CDR One minute and I'll just make this little tweak.

06 01 05 50 CDR DSKY's blank; average g's on.

06 01 06 04 LMP ..., okay?

06 01 06 06 CDR Okay.

06 01 06 19 LMP That ..., Pete, it's fantastic.

06 01 06 25 CDR Burning.

06 01 06 54 CDR That's it - POO. ENTER.

06 01 07 00 LMP Okay. ... good ..., Pete. ...

06 01 07 13 CDR Six miles, Dick.

06 01 07 15 CMP Okay, Pete.

06 01 07 16 CDR I mean 5 miles.

06 01 07 20 CMP I got you at 5.

06 01 07 33 LMP ...

06 01 07 35 CDR Now, you got to get this LIMIT CYCLE, Al.

06 01 07 38 LMP All right.

06 01 07 43 CDR We're in the tight deadband. The ANTENNA, AFT; verify COMM, SLEW.

06 01 07 53 LMP ... B, AUTO TRACK; ... test. Be about 5 minutes.

06 01 07 57 CDR All right.

06 01 08 09 LMP ... that radar in S-band ...

06 01 08 12 CDR Don't do it now.

06 01 08 14 LMP I'm not going to, but this is the time you do. I don't think we can hold it all the way.

06 01 08 21 CDR There it is, 4.425 at 48 feet per second.

06 01 08 25 LMP S-band - it's there.

06 01 08 46 CDR You know, it feels good when you make a burn, doesn't it?

06 01 08 49 LMP Oh, yes.

06 01 08 50 CDR Especially when you burn sideways. You go bloo-oop.

06 01 08 54 LMP I like that. You get - -

06 01 08 55 CDR Man, I'm getting the crap ...

06 01 08 58 LMP I think your idea of ... this seat is a good one. Hey!

06 01 09 02 CDR What's the matter?

06 01 09 03 LMP ... Just laying over there. When you look up, some piece of paper goes by -

06 01 09 18 CDR Four miles, 26 - -

06 01 09 19 LMP Thirty-four - -

06 01 09 20 CDR - - feet per second.

06 01 09 21 LMP - - 34, 24. Let's see. Three balls - -

TIME SKIP

06 01 35 04 CDR That a boy. Push the ... button, Dick.

06 01 35 20 CDR Hey , Captain?

06 01 35 21 CMP How's it going?

06 01 35 22 CDR Okay. Go FREE.

06 01 35 24 CMP FREE.

06 01 35 25 CDR Very good, we're in good shape. Go ahead and ... -

06 01 35 29 CMP That's where I was supposed to go, wasn't I, was FREE?

06 01 35 31 CDR Yes, sir. And you're looking good, just as stable as a rock. Go ahead.

06 01 35 35 CMP Wait a minute. Just let me stabilize a little bit.

06 01 35 38 CDR Okay. It's looks pretty stable to me.

06 01 35 40 CMP Pitch ...

06 01 35 41 CDR Huh?

06 01 35 42 CMP I want to pitch down just a little bit.

06 01 35 44 CDR Oh, okay.

06 01 35 45 CMP Let the dynamics die out just a little.

06 01 35 47 CDR Okay. It's hardly moving at all.

06 01 35 51 CMP Well, that's just fine. I'd like for you to pump down a little bit.

06 01 35 54 CDR Okay. Steady as a rock.

06 01 35 58 CMP Okay. I'm getting it down towards the attitude.

06 01 36 00 CDR Okay, babe.

06 01 36 02 CMP Okay?

06 01 36 03 CDR Go ahead.

06 01 36 04 CMP You ready to retract?

06 01 36 05 CDR I'm ready to retract.

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06 01 36 07 CMP Okay, Charlie Brown - in we go.

06 01 36 11 CDR Okay.

06 01 36 22 CMP And you're all through, boy.

06 01 36 23 CDR Okay - -

06 01 36 24 LMP Hey, that's great.

06 01 36 25 CDR MODE CONTROL switches are OFF, pal, and you got it.

06 01 36 28 CMP Thank you, thank you.

06 01 36 29 CDR Super job that you've done - wasn't even a ...
Okay. Read me the checklist there, Al.

06 01 36 39 LMP Okay. MODE CONTROL, AGS, ATT HOLD.

06 01 36 43 CDR AGS, ATT HOLD.

06 01 36 45 LMP ATTITUDE CONTROL, three of them, PULSE.

06 01 36 47 CDR PULSE.

06 01 36 48 LMP GUIDANCE CONTROL, AGS.

06 01 36 49 CDR GUIDANCE CONTROL, AGS.

06 01 36 50 LMP DEADBAND, MAX.

06 01 36 52 CDR DEADBAND, MAX.

06 01 36 53 LMP BALANCE COUPLE, ON.

06 01 36 54 CDR BALANCE COUPLE's ON.

06 01 36 55 LMP Verify FORWARD DUMP VALVE, AUTO.

06 01 36 58 CMP Hello, Houston; Clipper.

06 01 37 00 LMP It's AUTO, Pete. VERB 48.

06 01 37 05 CMP Roger. That's the end of the TV show, we've got some work to do.

06 01 37 13 LMP Hey, I'll do ... for a while, ...

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- 06 01 37 15 CDR Hello, there - -
- TIME SKIP
- 06 02 24 37 CDR Okay. Now, Al - we got to bag up a bunch of other stuff ... - -
- 06 02 24 44 LMP Say, did they want us to - these cameras - do they want us to send them off? Take the ... of this little bag, too, or just take them out and dust them and put them in that bag?
- 06 02 24 55 CDR No, no, it says just dust and - the bags. If you take it out of this bag, and dust it and put it in that bag.
- 06 02 25 07 LMP No, I think it all goes in - the double bag. In other words, you put that bag inside the one that I just gave you.
- 06 02 25 12 CDR Okay.
- 06 02 25 13 LMP Did - did I - did I have it? Did I hand you the tape to fasten it with?
- 06 02 25 16 CDR No. Now, this one's ...
- 06 02 25 20 LMP Intrepid; Roger.
- 06 02 25 22 CDR Is that the ...? What the hell ... ask that little ...
- 06 02 25 31 LMP Oh, I know what they did, ...
- 06 02 25 38 CDR Now, there's three holder things for the 70 millimeter.
- 06 02 25 44 LMP I've got them right here.
- 06 02 25 46 CDR And there's two holders for 70 millimeter.
- 06 02 25 48 LMP I've got them both, but I just haven't gotten to them - -
- 06 02 25 50 CDR Oh, okay - -
- 06 02 25 51 LMP - - . . . - -

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06 02 25 53 CDR I got the hose?

06 02 25 54 LMP No, here it is up here.

06 02 25 59 CDR What's it look like?

06 02 26 00 LMP ... You don't think we could bag her in?

06 02 26 05 CDR I'm kind of trying ... if you don't ...

06 02 26 10 LMP Yes. ... bad.

06 02 26 15 CDR Now, if you'll hand me - the contingency samples bag, and a little jobber-do, I'll put those in it.

06 02 26 29 LMP Man, that -

06 02 26 34 CDR The contingency samples.

06 02 26 37 LMP Don't bother dusting them.

06 02 26 46 LMP ... see that one?

06 02 26 49 CDR Okay, I'll tell you what, you'd better open it. You look at - my hands are filthy, now (laughter). It's ... juggling act (laughter). Nobody but a mule who worked like a mule would ... Look at all this shit that comes out of this contingency sample.

06 02 27 21 LMP This stuff?

06 02 27 22 CDR I'm sure we got part of it; probably got it just ...

06 02 27 26 LMP Yes.

06 02 27 27 CDR Now, let me have your CO₂ thing and I'll get out of your way (laughter).

06 02 27 35 LMP I don't know where it is, Pete. It was floating by you a minute ago. Here it is; it's not right - floating by. Now, let me look and see ... no, babe, it's right here.

06 02 27 54 LMP Why don't you work up this film first --

06 02 27 55 CDR All right, let me get that other contingency sample. Okay, I'll ...

06 02 28 09 CDR Hey, Dick? Contingency samples.

06 02 28 14 CMP Where the hell does it go?

06 02 28 16 CDR I don't know where it goes. Does it go ...?

06 02 28 24 LMP All right. ... down.

06 02 28 26 CDR Here, I'll hold the ...

06 02 28 28 LMP Okay.

06 02 28 32 CDR I'll hold the bag.

06 02 28 34 LMP That's the way to do it.

06 02 28 39 CDR Go ahead and use another bag.

06 02 28 42 LMP ...

06 02 28 48 CDR Hey, I'll tell you, if I ... this one ...

06 02 28 57 LMP You ought to ... the ... off just this side ...

06 02 29 14 CDR Stand up - I ... where you're going to put that.
This bag's got a hole in it. ...

06 02 29 27 CDR You have problems.

06 02 29 33 LMP They're just hooked up in-between.

06 02 29 35 CDR Okay.

06 02 29 38 LMP ...

06 02 29 42 CDR (Laughter) I wish I had a freaking picture of this.

06 02 29 49 LMP ... don't need this, ... you'll remember this.
Where the hell did it go?

06 02 29 56 CDR What are you looking for?

06 02 29 57 LMP That one other piece ... Where the freak did it
go? ...

06 02 30 22 LMP It's in the bag.

06 02 30 24 CDR Okay. Ready to vacuum?

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06 02 30 26 LMP ... get that other rock. So funny ...
06 02 30 41 CDR Can't you see? ...
06 02 30 42 LMP ...
06 02 30 43 CDR No, but you take all the shit out ...
06 02 30 56 LMP Watch it.
06 02 31 08 CDR Okay. Now, all we need is the 16-millimeter lenses. Let me give you that. ... There's the 16 millimeter, right there. Hey, Dick?
06 02 31 21 CMP Yes.
06 02 31 23 CDR Go! Now!
06 02 31 32 CMP Okay.
06 02 31 37 CDR Steady.
06 02 31 39 LMP ... in.
06 02 31 40 CDR Oh, okay. Hey, that stuff didn't get dirty, did it? You brushed it off.
06 02 31 44 LMP No, ...
06 02 31 48 CDR Yes.
06 02 31 49 LMP You're holding the wrong part.
06 02 31 52 CDR ... We're coming up on the ...
06 02 31 56 CDR Yes, what's that chamber back to?
06 02 31 58 LMP ...
06 02 32 01 CDR The son of a bitch back ...
06 02 32 04 LMP Yes, it did. ... Good ... all that stuff would or - - (Whistling)
06 02 32 16 LMP Pitch. Maybe it pitched over, maybe it shut down after it pitched over.
06 02 32 20 CDR Probably shut down before we took off (laughter).

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06 02 32 29 LMP This is a great sight, I'll tell you. You're right, I was working ... what we were doing. Missed the whole freaking flight.

06 02 32 40 CDR (Laughter) Okay, now. What we've got - Let's get some ... out of here.

06 02 32 49 LMP Okay. Where's your - where's your checklist?

06 02 32 55 CDR Checklist is right there. Do you want to go back - want to ...?

06 02 32 57 LMP Hey, you know what's bothering me?

06 02 32 59 CDR What?

06 02 33 01 LMP The transmitter is - See ... You sure it's on this ...?

06 02 33 10 CDR No, it's off to this side.

06 02 33 13 LMP ... looks right.

06 02 33 20 CDR What did we do with the TV camera?

06 02 33 22 LMP ...

06 02 33 23 CDR We ... back.

06 02 33 24 LMP It's in the bag. Son of a bitch, babe, ... I'm going to push in that button.

06 02 33 30 CDR Here it is, right behind me now. I got it. Wheee! There it goes!

06 02 33 37 LMP ... back taking those pictures - cabin return. ...

06 02 33 53 LMP Right. Can't get it ...

06 02 33 59 CDR They didn't tell us, but they're ... Okay, now that's all the bags ...

06 02 34 07 LMP ... - -

06 02 34 08 CDR Now, wait a minute. You've got to vacuum off these PGAs. Dick?

06 02 34 12 LMP Yes, if we don't - -

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06 02 34 18 CDR Dick? Ah, ah, ah! (Whistling) Don't damp your line!

06 02 34 26 CMP ...

06 02 34 28 CDR Hey, wait, you know where that stuff goes; it goes right back where it came from.

06 02 34 31 CMP I can't get at it right now.

06 02 34 32 CDR What?

06 02 34 33 CMP I can't get at it.

06 02 34 37 CDR He's freaking mad at me because I had to give him this gear (laughter).

06 02 34 41 LMP ... DEPRESS. ...

06 02 34 45 CDR Let's clean that off.

06 02 34 47 LMP Yes. You going to need the scissors?

06 02 34 49 CDR No.

06 02 34 50 LMP Okay.

06 02 35 04 LMP Hold it. ... this stuff. That's right. Now, put it - put it in that big bag. ...

06 02 35 17 CDR You know, it looks burned.

06 02 35 19 LMP Just all that dust.

06 02 35 22 CDR ...

06 02 35 25 LMP ... Let's get it and go. Let's get - It's good for a while.

06 02 35 40 CDR ... worked was when I moved it. That's possible too, when I took it off that sound could do it; that may have bombed it right then.

06 02 35 48 LMP ... so.

06 02 35 53 CDR Not in this one. Why not put it in the big bag?

06 02 35 56 LMP Okay.

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06 02 36 01 CDR Hey, Dick?

06 02 36 03 CMP Yes.

06 02 36 05 CDR Put - put this baby in the big bag. It's dirt.

06 02 36 10 CMP Okay.

06 02 36 11 CDR You didn't have the bag ...

06 02 36 17 CMP ... back.

06 02 36 19 CDR Huh?

06 02 36 20 CMP Did it work?

06 02 36 21 CDR No. It didn't work. We got no TV.

06 02 36 24 CMP Huh?

06 02 36 25 CDR We didn't get any so we had to bring it back. Worked for about 5 minutes and quit.

06 02 36 30 CMP Is that why you brought it back?

06 02 36 32 CDR Yes, he wanted us to bring it back. No freaking TV after I got off the ladder.

06 02 36 44 CDR Whoops! Okay, Al?

06 02 36 54 LMP Yes.

06 02 36 55 CDR What's the ... figures?

06 02 36 56 LMP Okay, ...

06 02 37 01 CDR I think I'd better smoke two of these boxes here, though. ...

06 02 37 06 LMP Just get everything that we'd want.

06 02 37 08 CDR Okay, ...

06 02 37 23 LMP There ain't nothing in that one. Where are we going to put all these empty pilot preference bags that we bring back? We got a kind of a garbage bag for them? Yes, we'll have to - figure out something.

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06 02 37 43 CDR Okay, now, this side's clean, Al; there's nothing in those two RCU banks. There's nothing else back here. Now - Here's all the used food, good food. That good food?

06 02 38 03 LMP Yes.

06 02 38 05 CDR Oh, shit, shit! God damn - freaking gumdrop!
(Laughter)

06 02 38 13 LMP You got something against gumdrop?

06 02 38 15 CDR Yes.

06 02 38 16 LMP I figured that.

06 02 38 17 CDR Hey.

06 02 38 18 LMP Yes?

06 02 38 19 CDR I wonder if all these gumdrops didn't have pills in them; went to the lunar ... - You know that? I got that feeling, don't you?

06 02 38 28 LMP I have a feeling that you don't need that
(laughter). I don't care, but I notice you've been good about it.

06 02 38 35 CDR Well, I'll tell you, I'm going to take some of this food back because we'll probably need it.

06 02 38 38 LMP Oh, yes. Let's take ... - -

06 02 38 41 CDR What?

06 02 38 42 LMP Let's take this food to the command module; I'll be able to use it.

06 02 38 49 CDR That thing's holding good, that - Look at that stuff ... down there - -

06 02 38 52 LMP That shit, that - that's waste food - and that's all ...

06 02 38 59 MS ...

06 02 39 01 CDR Now.

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06 02 39 03 LMP Okay. Need another bag. Let's dump it in a garbage bag.

06 02 39 12 CDR This one towel is clean; we only brought -- There's four books that have got to go back.

06 02 39 23 CDR Shit!

06 02 39 24 LMP Shit what? What's that? ...

06 02 39 37 CDR Hey, I thought it ... canister, no shit!

06 02 39 40 LMP ... I filled it.

06 02 39 41 CDR Hey, Dick?

06 02 39 42 CMP Yes? Yes.

06 02 39 46 CDR I know you're not going to be happy with this, but we got to bring back the uneaten food. And there's one clean towel.

06 02 39 53 CMP What did you do with the shit?

06 02 39 55 CDR Huh?

06 02 39 56 CMP What did you do with the shit?

06 02 39 57 CDR Yes, that's fine. But that towel is a good towel; I got - Listen, we're so filthy dirty, I can't believe it.

06 02 40 03 CMP Why don't you take those suits off over there?

06 02 40 05 CDR Hey, Dick, we got - got your - Have you seen them?

06 02 40 08 CMP Yes, I've seen them.

06 02 40 09 CDR Look at them (laughter). Look just like a mud hen.

06 02 40 20 CDR Why don't you just throw that whole McDivitt purse, Al? As a matter of fact, hand me that stuff, and I'll hold this for you, with these here.

06 02 40 31 LMP But most of these have got to stay. ... for the burn. Sorry. Okay. ...

- 06 02 40 48 CDR ... on SECONDARY now; look at that thing go from nothing to ...
- 06 02 40 54 LMP ... erratic.
- 06 02 40 55 CDR Man, that's ... flight data file.
- 06 02 40 58 LMP Okay.
- 06 02 40 59 CDR Dick?
- 06 02 41 02 LMP Well, what are we going to do about these gloves; we take them both ... suits, right?
- 06 02 41 05 CDR We got to take our gloves. Hey, there's a regular checklist on how to do that there, someplace. There's a main checklist, I've been reading it. The minute I start reading it, ... well, what's the difference. Okay.
- 06 02 41 16 LMP Well, I say okay, and then ... just go to the suit ... That's okay with me.
- 06 02 41 19 CDR No, I'm sorry, I didn't - I didn't mean for you to do it that way, but I was just trying to get the big items out of the way. Now, let's take the checklist and read it off. If you'll hand it to me, I'll check it off.
- 06 02 41 32 LMP Okay. Where's my pencil? I got it right here. All right? It says right up there, "PREP, step 2."
- 06 02 41 36 CDR Okay. Step 2. Doff helmets and gloves; place helmet stowage bag on deck, right side forward.
- 06 02 41 46 LMP I just put it there.
- 06 02 41 47 CDR Unstow contingency sample and CSC cassette from upper lunar boot compartment and place in TSB. When pressure equal, overhead dump valve, ... A and B; open hatch; remove drogue; pass to LMP. Receive probe; stow probe on left-hand side outboard (double) restraint cable. Drogue over probe, using inboard (single) restraint cables through drogue handles. Okay. Receive bags and vacuum brush from CSM and stow in TSB. CABIN GAS RETURN, EGRESS; SUIT GAS DIVERTER VALVES, EGRESS. SUIT CIRCUIT RELIEF, CLOSE; COMMANDER SUIT ISOLATION,

SUIT DISCONNECT; UPDATA LINK, three, to DATA; MSFN uplinks CSM; LM vectors to T_{ig} minus 10. Okay, did you leave that switch in DATA?

- 06 02 42 31 LMP Not now. I haven't gotten out, yet.
- 06 02 42 33 CDR Okay.
- 06 02 42 34 LMP Thought we were just supposed to leave it there.
- 06 02 43 03 CDR Okay, I'll have regular gloves to stow to go over, Al.
- 06 02 43 07 LMP Okay. I've got them right here; when they get ready to go. Ought to be going with our suits, now.
- 06 02 43 12 CDR Well, now, we can get right on the checklist, because we've got everything already done.
- 06 02 43 18 LMP Okay. Here's two gloves, right here.
- 06 02 43 21 CDR All right. Now, you just hang on to that.
- 06 02 43 25 LMP The gloves --
- 06 02 43 26 CDR We need to vacuum them.
- 06 02 43 27 LMP ...
- 06 02 43 28 CDR Okay. Let me clean them.
- 06 02 43 34 LMP Got to be collected and put into the ...
- 06 02 43 52 CDR Hey, Dick?
- 06 02 43 53 CMP Yes.
- 06 02 43 54 CDR Put these in the L-shaped bag, please?
- 06 02 44 01 LMP Two more.
- 06 02 44 19 CDR Here's some more for the L-shaped bag.
- 06 02 44 33 CDR Okay. The helmets next, right?
- 06 02 44 37 LMP Well, I thought we wanted to keep them on.

06 02 44 39 CDR Well, it ... Let's just get the stuff out of here.

06 02 44 47 CMP Put them in the bag.

06 02 44 48 LMP Every time I get - -

06 02 44 49 CDR What?

06 02 44 50 CMP I put them in the bag.

06 02 44 57 LMP Dick, where are they?

06 02 44 59 CMP I don't know. Where are they?

06 02 45 00 LMP I don't know; they're over there someplace.

06 02 45 01 CMP ...

06 02 45 02 LMP Is he hunting for them?

06 02 45 03 CDR Yes. We didn't bring the bags over. We'll just stow this in the L-shaped bag for the moment. I don't know; maybe you'd better find the bag for that.

06 02 45 12 CMP Why?

06 02 45 13 CDR Because ... we'd better stick them straight in the L-shaped bag.

06 02 45 17 LMP That's right.

06 02 45 20 CMP What you guys doing on your ...?

06 02 45 21 CDR Remember where we put it, Al?

06 02 45 24 LMP What?

06 02 45 25 CDR The helmet stowage bag? Is it there?

06 02 45 28 CMP I got one.

06 02 45 29 CDR We left - we took our helmets out of them, and we handed them all back to you, Dick.

06 02 45 35 CMP Well, I got one.

06 02 45 38 LMP I don't know what's giving.

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06 02 45 40 CMP Let me look --

06 02 45 41 CDR Maybe we stuck it back on the wall.

06 02 45 42 CMP Let me get your gloves in there; I'll show you.

06 02 45 47 CDR We obviously stuck them back on the wall.

06 02 45 51 LMP What if we didn't; I didn't; Dick didn't.

06 02 45 53 CDR (Laughter) Okay, look on that checklist, and see what else --

06 02 45 58 LMP You got it, babe? You got the checklist?

06 02 46 01 CDR No, you took it back from me.

06 02 46 02 LMP No, sir. I put it right up there. Right here. ... Pete. I just didn't hear you.

06 02 46 10 CDR Okay, gloves, four; helmets, one so far. Lunar boots; hell, we didn't bring any back.

06 02 46 17 LMP ...

06 02 46 20 CDR You'll remember to bring your helmet. We just need ... and we ... 30 bags of extra rocks. ... Surveyor bag. Vacuum PGA. We've received B-5 and 6. Cut ... to no gimbals. Hey, I'll tell you what I haven't seen are those neat personal preference kits.

06 02 46 42 LMP I'll tell you where they are.

06 02 46 44 CDR Okay.

06 02 46 45 LMP One of them is on the very back, back there with the flag.

06 02 46 50 CDR Very back, back there with the flag? There isn't a thing back here, Al.

06 02 46 54 LMP Yes, there is, in that lunar boot compartment.

06 02 46 56 CDR Which one, the lower one?

06 02 46 58 LMP I think it's the upper, Pete.

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06 02 47 00 CDR There isn't anything in here.

06 02 47 01 LMP Right there it is. No, no, that's a PAD I just flagged in there yesterday. Well, look in the lower one then. Well, no, it's the compartment behind us, Pete.

06 02 47 09 CDR No, there's nothing in there; I just looked. We just ... No freaking flag anywhere in sight.

06 02 47 20 LMP Yes, there is.

06 02 47 22 CDR There they are.

06 02 47 23 LMP Well, wait, let me give you something else while you're getting there.

06 02 47 26 CDR Yes.

06 02 47 29 LMP Here's - here's - I don't know where they are all coming from, but - Here's the flag one; give that to Dick.

06 02 47 36 CDR Yes.

06 02 47 37 LMP And this - this is the one that got - this that we cut out yesterday. You know?

06 02 47 42 CDR Yes, why don't you hang onto that right now, and --

06 02 47 45 LMP ...

06 02 47 46 CDR What?

06 02 47 47 LMP What's that?

06 02 47 48 CDR Hey, Dick?

06 02 47 49 CMP Yes?

06 02 47 52 CMP Yes?

06 02 47 53 CDR Here comes the PPK stuff.

06 02 47 56 CMP Wait a minute.

06 02 48 14 LMP You want the COAS, Pete?

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06 02 48 18 CDR Yes, ..., Al.

06 02 48 21 CMP Pete?

06 02 48 23 LMP Might as well fill it in; let's get our - -

06 02 48 25 CDR Fill up that ditty bag with everything we can walk out of here with.

06 02 48 32 LMP Take the COAS - what-you-call-it. You know that - dark cloth?

06 02 48 38 CDR Yes.

06 02 48 39 LMP That's there. ... Okay.

06 02 48 51 CDR You watch for a couple of seconds, Al.

06 02 49 01 LMP ... with the DSE tape.

06 02 49 07 CDR We don't need any more ... or Afrin.

06 02 49 09 LMP Pep pills, either.

06 02 49 12 CDR How'd you like that one today?

06 02 49 13 LMP Pretty good, I guess. I feel pretty good.

06 02 49 28 LMP What does it say on the checklist about getting DSE tape to the ...? Is there anything more than turn the tape off?

06 02 49 34 CDR No, I'll get it. Let me get on - lower tape recorder circuit breaker.

06 02 49 38 LMP Where is that? Probably on my side.

06 02 49 41 CDR Someplace there in the COMM, isn't it?

06 02 49 44 LMP Oh, no, it's over on your side.

06 02 49 46 CDR Is it?

06 02 49 47 LMP Yes.

06 02 50 05 CDR Hey, Dick?

06 02 50 07 CMP Yes.

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06 02 50 09 CDR Cut the DSE.

06 02 50 14 LMP Take this ...

06 02 50 16 CDR Wait, wait, wait, let's - -

06 02 50 17 LMP No, no, wait a minute; you don't want to wind up with that stuff in your ... Take the pills out of it; ...? Junk?

06 02 50 24 CDR Some of that belongs in there in that -

06 02 50 27 LMP Oh, it does?

06 02 50 28 CDR Yes, like a - Take that over, and I'll offload it and bring it back.

06 02 50 35 LMP Okay, I think you're going to be stuck with it.

06 02 50 38 CDR Well, I don't think it's - Well, let me have it to put it in here.

06 02 50 41 LMP We're not supposed to.

06 02 50 43 CDR Why don't I just - -

06 02 50 46 LMP I'll do it; I'll figure out the best way.

06 02 50 48 CDR Well, I've got a set of pills I got to get rid of. We ought - -

06 02 50 51 LMP Yes. . . . -

06 02 50 53 CDR - - we ought to leave that kit though on this LM stowage.

06 02 50 55 LMP We'll leave the kit in here; I'll take it over there and then after we get our suit off ...

06 02 51 03 CDR Okay, Al.

06 02 51 15 LMP I don't know what you do with these drops but they're nice.

06 02 51 18 LMP ... No damn wonder. This ... stays over here. If people saw this, they wouldn't believe it.

06 02 51 34 CMP Got to go do - -

06 02 51 35 LMP ... I think we ought to put that clean - that cleaner stuff, and some of the dirty stuff and hand back the bag.

06 02 51 42 CDR Yes.

06 02 51 43 LMP Then, we can get rid of this stuff.

06 02 51 44 CDR Al says that we can put this Kleenex and some the other stuff that's in this bag --

06 02 51 49 LMP Got a ... there isn't any place to put it though. It won't stay stuck.

06 02 51 52 CDR If we could get going with it - We'll have to put everything in the same bag. It's a freaking mess.

06 02 52 00 CMP Why the hell you packing all this shit?

06 02 52 02 CDR Well, we've got to bring the data books back.

06 02 52 06 CMP What the hell else is in it?

06 02 52 08 CDR Hey, what do we need that Kleenex for, Al?

06 02 52 10 LMP We don't; I thought you wanted it.

06 02 52 12 CDR Freak, I don't want it. Give me the Kleenex, and I'll leave that over here. We got plenty of Kleenex --

06 02 52 16 CMP What next, Pete?

06 02 52 17 CDR Hey, take that Kleenex back, and take the Kleenex out of it, and stick those pills in it. Okay. Take those Kleenexes out --

06 02 52 25 LMP I got it; I got it. The pills kit - here's the pill kit. Let's throw the pills in and leave the kit here. There you go? Just a minute -

06 02 52 35 CDR That'll do the job right there.

06 02 52 40 LMP ... but we have to do this.

06 02 52 42 CDR You sure this is full?

06 02 52 47 LMP Here you are. Good luck.

06 02 52 51 CDR What do you want out of here, just the pills?

06 02 52 54 LMP I want - the only thing I want - No. Let me show you what belongs in the command module. All I want is enough sleeping pills so that I don't have to fall on my - -

06 02 53 01 CDR There isn't any sleeping pills in here.

06 02 53 03 LMP There's a bunch. Why don't you open it?

06 02 53 08 CDR Yes?

06 02 53 09 LMP And I'll get the sleeping pills.

06 02 53 10 CDR All right. All right.

06 02 53 11 LMP ...

06 02 53 13 CDR All right.

06 02 53 14 LMP Okay. Here's the Darvon; we'll - -

06 02 53 15 CDR Decongestants off the command module.

06 02 53 17 LMP I'll take ...

06 02 53 19 CDR The ... Freak, you don't need those ..., do we?

06 02 53 23 LMP Yes, we do. I don't know the ... thinks we do.

06 02 53 26 CDR Got decongestant?

06 02 53 27 LMP Yes. And all that stuff. How about the nasal emollient - -

06 02 53 31 CDR That belongs in the command module. Let me read you the stuff that belongs to us that's in that bag.

06 02 53 35 LMP Yes.

06 02 53 36 CDR That's ... You want some?

06 02 53 38 LMP Yes. There you go. This stuff's good. All right. Okay. Dick?

06 02 53 44 CMP Yes?

06 02 53 45 LMP Keep it out. We're listening.

06 02 53 47 LMP Everything in ... goes to the command module.

06 02 53 50 CDR Freaking packrat.

06 02 53 52 LMP Wait a minute. Let me tell you which one. One of these --

06 02 53 57 CDR You got ... right there.

06 02 54 00 LMP Good old ...

06 02 54 04 CDR You want it?

06 02 54 06 LMP Yes. ... Put this decongestant back in --

06 02 54 10 CDR Okay. That's it.

06 02 54 12 LMP Put that back in the MED kit and forget it.

06 02 54 16 CDR Oh, shit.

06 02 54 18 LMP Pete, don't let me forget when we go out to get this other stuff that we've got over here, Pete. We got the PPKs back. ...

06 02 54 31 CDR All right. Yes. Don't forget that. Hey, Richard?

06 02 54 35 CMP Yes.

06 02 54 37 CDR Put this over on Al Bean's side; he's got all the freaking pills out of the CSM medical kit.

06 02 54 43 CMP ... do that --

06 02 54 44 CDR I don't know; he -

06 02 54 45 LMP I want to take it.

06 02 54 47 CDR He wants to take them.

06 02 54 49 LMP Tell him I can sell them.

06 02 54 54 CDR He doesn't - he doesn't want to get pregnant.

06 02 54 57 CMP He can take the goddamned thing and stuff it for all I give a shit.

06 02 55 00 CDR He doesn't want to get pregnant.

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06 02 55 02 LMP Tell him I'm going to sell them. ... Make a profit.

06 02 55 07 CMP He can - could do that, too.

06 02 55 10 CDR You know, that looks like it's ... in that cloud of shit (laughter). The freak ... has gone crazy since we left.

06 02 55 17 LMP Nobody - by golly, put those there. There's a couple of good towels.

06 02 55 21 CDR Yes. There's a couple of good towels, we'll need those.

06 02 55 26 CMP The blue ones. You won't be going, Pete; I've been pretty good here, as a matter of fact.

06 02 55 32 CDR ... Goodness sakes, I don't know where the time went to. ...

06 02 55 40 CMP ...

06 02 55 44 CDR You know how far we went today? We did a 1-mile traverse, today.

06 02 55 49 CMP One mile --

06 02 55 50 CDR I got all the Surveyor stuff. We - we were leaping over that lunar surface like a freaking bunch of gazelles.

06 02 55 57 LMP It - it's wild.

06 02 56 00 CDR It really is.. I really got to where it felt like I was at home. I really thought I could step out of that stuff, then just walk around the corner to the nearest drugstore.

06 02 56 11 LMP Like you said, by the time you get good at it, you bail out.

06 02 56 14 CDR Yes.

06 02 56 17 LMP Well, I'll tell you, I learned a lot though.

06 02 56 19 CDR We could sure make some improvements in stuff.

06 02 56 21 LMP You're not kidding.

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06 02 56 22 MS ...

06 02 56 25 LMP I mean not only besides being dirty, Dick - Look at my back. That freaking thing is practically torn out! All it did was 8 hours' worth of EVA.

06 02 56 35 CMP ... feel a lot you ...

06 02 56 39 CDR Yes, yes.

06 02 56 41 LMP Do you want your ... strap?

06 02 56 43 CDR Might as well throw them in.

06 02 56 50 LMP ...

06 02 56 52 CDR ... blue bags, Dick.

06 02 56 54 CMP You're going to make it. Aren't we?

06 02 56 56 CDR Hey, we're not going to do any gimbal lock or anything, are we, Dick?

06 02 57 00 CMP ...

06 02 57 03 CDR Oh, okay.

06 02 57 04 LMP ... we have 3 hours for ...

06 02 57 07 CMP ...

06 02 57 08 LMP What's the jettison time?

06 02 57 11 CMP Forty-eight even ...

06 02 57 14 LMP That's an hour and 3 minutes from now.

06 02 57 16 CDR Yes. What you're thinking of is burn time, Al, and that's an hour after that.

06 02 57 21 LMP That's right.

06 02 57 22 CDR We've just about got it licked. We could start ..., Dick -

06 02 57 25 CMP That's right ...

06 02 57 27 LMP ... about 60 seconds --

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- 06 02 57 29 CDR Freaking checklist isn't nothing.
- 06 02 57 33 LMP Hey, wait a sec; let's not get panicky. Okay, have you gone through all that --
- 06 02 57 38 CDR Yes, the whole freaking thing is empty except ...
- 06 02 57 43 LMP I got a bag to give you, yet.
- 06 02 57 44 CDR Yes, hurry and don't worry. Here, now.
- 06 02 57 48 LMP Here's some goodies, I guess. Better? ...
- 06 02 57 54 CDR ... it never went out. All right. Here.
- 06 02 57 58 LMP It's better. It's back center. This ...? This one? Here you are. Can you see it? ...
- 06 02 58 27 CDR Get that utility light; we'll need to take that.
- 06 02 58 31 LMP Well, I - Here's two of them.
- 06 02 58 34 CDR Take both of them.
- 06 02 58 36 LMP I'll take it ..., if you like.
- 06 02 58 38 CDR Yes, but it says take them. How about that camera stuff back there? Let's get that son of a bitch, too. Can we get that?
- 06 02 58 46 LMP No, I - I don't think so, Pete. It's a --
- 06 02 58 50 CDR Did you take the power off it? ... cut it.
- 06 02 58 53 LMP No, that's against the rules. It would be good if we could do it. Not these, though. We know it runs through this circuit breaker, so we could pull it out and cut it if you want it, but with neat ..., there's nothing that had to be cut.
- 06 02 59 08 CDR Okay.
- 06 02 59 09 LMP Just a minute. ... we'll both get the lights.
- 06 02 59 11 CDR Okay.
- 06 02 59 12 LMP Let's go.

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06 02 59 13 CDR You got the other light thing set for go, huh?

06 02 59 15 LMP Yes. It's in there somewhere; it must be it's ... this round ... Okay, now. All you got to do is cut that stuff off, Al - -

06 02 59 22 CDR Yes - -

06 02 59 23 LMP - - take this.

06 02 59 24 CDR Yes. I got it.

06 02 59 25 LMP Now, I need my scissors which are right here. Yes. Boy, we got it made. ...

06 02 59 30 CDR I'm going to go over and start getting out of my suit then.

06 02 59 33 LMP Okay, that'll be good. And then by the time I get there - -

06 02 59 36 CDR Wonder where these LCGs go? Back in the same place? Dick?

06 02 59 43 LMP Well, why can't we jettison the LCG?

06 02 59 46 CDR We can.

06 02 59 47 LMP Let's get rid of them.

06 02 59 48 CDR Yes.

06 02 59 49 CMP ... for me.

06 02 59 50 CDR These goodies on the LM? Hey.

06 03 00 00 LMP What?

06 03 00 01 CDR ... not take our PLSS antennas; that's a good thing.

06 03 00 07 LMP That's a good idea. There's no doubt about it; it cuts right on. That's ... a neat little thing ...

06 03 00 15 CDR Something happened to it.

06 03 04 27 LMP Hey, get me the ...

06 03 04 31 CDR Don't let it - don't let it get wrinkled. You know where I kept it?

06 03 04 37 LMP Put it there, Dick.

06 03 04 39 CDR Yes, I want to keep that for a while.

06 03 06 29 CDR Not sore, are you? I hope we can see our descent stage.

06 03 06 38 LMP Yes. Yes. ... All right.

06 03 08 40 CMP Yes. There's something ...

06 03 08 48 CDR ...

06 03 10 10 CMP You wait.

06 03 10 12 CDR Move that thing out of the way.

06 03 10 18 LMP Where's the data book?

06 03 10 22 CDR Where does it ...?

06 03 10 25 LMP Who has the book?

06 03 10 27 CDR What book?

06 03 10 35 LMP Yes, that's - Yes.

06 03 10 39 CMP Hey, here's something that should go.

06 03 11 20 CMP You're freaking around with what?

06 03 12 02 CMP I got 3 days to ... Think quick.

06 03 12 28 LMP Fantastic ...

06 03 12 30 CMP Very interesting.

06 03 12 47 LMP ... it undocked.

06 03 13 31 LMP Hey, Pete?

06 03 13 35 CDR What do you want?

06 03 13 37 LMP Here's your helmet.

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06 03 13 39 CDR I can't find the goddamned ...
06 03 13 44 LMP No. I - I'll look for it ... they're probably right under my feet where all those ... garbage bags. I'll help it ...
06 03 13 52 CMP Throw that ... too, why don't you?
06 03 13 56 CMP ... diverter valves.
06 03 14 03 CMP Hello, Houston; Yankee Clipper.
06 03 14 15 CMP We're ...
06 03 14 30 LMP That's something.
06 03 14 36 CDR ...
06 03 14 37 LMP Yes, sir.
06 03 14 40 LMP Okay, I'll get it in a minute.
06 03 14 47 CMP Hey, that stuff - that stuff that you just brought in - ...

TIME SKIP

06 04 58 16 CDR Ten minutes ...
06 05 00 14 SC ...
06 05 00 41 SC ...
06 05 00 46 SC Yes.
06 05 00 54 SC Hey, Al.

TIME SKIP

06 05 32 04 CMP ... Is that star moving?
06 05 32 12 CMP Here it is.
06 05 32 23 CMP 87 ...
06 05 32 24 CMP Houston, Apollo 12. ...
06 05 32 46 CMP Houston, Apollo 12. He won't answer me.

06 05 32 56 CMP Roger. Will you let me know when it's through with the burn, please?

06 05 33 09 CMP Will you - Call and let me know when ... finishes its burn?

TIME SKIP

06 14 16 07 CDR Roger-Roger.

06 14 16 10 CMP Roger. There are the torquing angles. Are you picking them up?

06 14 16 16 LMP ... the torquing angles ...

06 14 16 21 CMP Al, could you ...?

06 14 16 23 LMP Okay.

06 14 16 25 CMP Okay, I'm torquing at this time.

06 14 16 30 LMP All right.

06 14 16 44 CDR ... a tight deadband.

06 14 16 48 CMP By-by.

06 14 17 06 LMP ... splattered it all over the ...

06 14 17 26 LMP Well, there's a dry ...

06 14 17 53 CMP Sorry you thought I was helping you, but I wasn't.

06 14 17 58 CDR What are you doing, watching the ..., Dick?

06 14 17 59 CMP Why? There you go, look at that; there's the old star we've been missing.

06 14 18 13 LMP Five-balls Gordon they call him.

06 14 18 16 SC ...

06 14 18 19 CDR Okay. Go ahead. Hey, look at that ...

06 14 19 14 CDR There's water on the aft bulkhead here and the L-shaped bag. I'm reading the optics update; ...

06 14 19 35 CDR VERB 49, ENTER; AUTO; VERB 25, ENTER; plus 00000, plus 00000, plus 00000; PRO. ...

06 14 20 07 LMP Good show.

06 14 23 16 CDR Yes. ... 5 ... 35.6 ...

06 14 25 07 CDR Burn time is 19 seconds ...

06 14 25 25 CMP ... that star number?

06 14 25 58 CDR Oh, I'm sorry; 5, star 5, Dick. There's so many of the boresight stars ...

06 14 26 23 CMP Twenty-five, 26 ...

06 14 26 40 CDR (Yawn) ... you think we got enough ... time when we get back?

06 14 27 14 CDR ... 59, four balls ..., minus 136, plus 38.0.

06 14 27 55 CDR Yes, he was going down ... off to the right. There you go.

06 14 28 36 CDR Well, they did ask that we try and stick to the colors to get an idea of how much ... That's why ...

06 14 32 41 CDR Okay, they're all white; that must mean they're really good. ...

06 14 33 24 LMP I'd better go ...

06 14 34 56 CDR ... all the way around; let me get some ... from you.

06 14 34 58 LMP I'm not sure, babe.

06 14 37 19 LMP Yes, ... The first time, you know, you said was after the first burn was because, hell, that ... never came down.

06 14 39 31 CDR I'll tell you, when I got - got down, you know ... looked over the hill, that freaking bug ... the hole.

06 14 43 41 LMP And digital event timer is set. POO. SPACECRAFT CONTROL, CMC, AUTO. Maneuver to PAD burn ATT 2; we did that; zero, zero, zero; boresight and sextant

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star check. What about boresight star check? Rasalhague, huh? I didn't know we had to do one of those. Hey, there it is, by God. Yes. probably see it.

06 14 44 15 LMP That's him. He's bigger than hell right there.

06 14 44 19 SC ...

06 14 44 26 CMP That's good. He's there. Except I don't know how to ... check on those.

06 14 44 44 CDR Okay.

06 14 44 53 LMP Boresight sextant star check, we've got that. Okay, P40.

06 14 45 08 CMP ... looking good ... there.

06 14 46 00 CMP ... circuit breaker was busted.

06 14 46 17 CMP Okay. We're all squared away over here. Got the panels. MANUAL ATTITUDE, three, RATE COMMAND; LIMIT CYCLE, ON; RATE COMMAND, LIMIT CYCLE's ON; DEADBAND, MIN; RATE's LOW; TRANSLATION HAND CONTROLLER is on; SCS TVC, two, in RATE COMMAND; RATE COMMAND; TVC GIMBAL DRIVE, two, and they are in AUTO. Standing by for - ...

06 14 47 21 CDR ... now, we have - I'd hate to be in an international incident, but the LRL is going to get nasty ... lunar surface stuff.

06 14 47 51 CDR We'll call it ... Not bad. ...

06 14 48 06 CMP This plane change is which direction to the north? Pete, this plane change is to the north, isn't it?

06 14 48 14 CDR Yes, I believe it is. ...

06 14 48 20 CMP It's plus Y - plus Y. We're making it on the -

06 14 48 32 CDR All - If I remember what the guy said was all it does is ...

06 14 48 47 LMP ... Shit, I'm ... it really does. ...

06 14 49 15 CDR Seeing all kinds of ... There's no doubt about it, ... shit like this ... the LRL (laughter).

06 14 50 20 CDR They know it. They - they think all three of us ...

06 14 50 32 CMP I know Sam ... Screw him. Not me.

06 14 50 50 CMP ... It's your break. Bad the whole trip.

06 14 51 39 CMP Forget it. It's - it's just on local.

06 14 51 49 CDR Okay. I'm up to 10 minutes - three more.

06 14 52 22 CMP And there's sunrise. Boy, does it come up! Bang! And there it is.

06 14 54 25 CMP What's that?

06 14 54 58 CDR Yes, I think you're right. I ...

06 14 55 26 CMP Right through here.

06 14 55 51 CMP You're going to like this burn, Al. Yes. It's a hummer. Here it goes.

06 14 56 34 CMP Fifty-six, and that's for 8 minutes. Okay. ... Just wanted to make sure we get the 20⁴ in time.

06 14 57 18 CMP In a few minutes, we'll get AOS here.

06 14 57 28 LMP Did we get a GO for this burn?

06 14 57 29 CMP Yes, we did.

06 14 57 48 CMP (Singing)

06 14 58 14 CDR Can't hardly ... in this ...

06 14 58 32 LMP AC 1/MAIN A; AC 2/MAIN B.

06 14 58 42 LMP Two, AC.

06 14 58 47 CDR ... DIRECT, OFF.

06 14 58 48 LMP DIRECT is OFF.

06 14 58 49 CDR ...

06 14 58 50 LMP ATT 1/RATE 2.
06 14 58 51 CDR ...
06 14 58 52 LMP SCS.
06 14 58 55 LMP Armed.
06 14 58 59 LMP 1 PITCH -
06 14 59 00 LMP Mark.
06 14 59 03 LMP 1 YAW -
06 14 59 04 LMP Mark.
06 14 59 05 CDR Okay. ...
06 14 59 22 LMP MTVC?
06 14 59 24 CDR ...
06 14 59 26 LMP CMC back to zero.
06 14 59 31 LMP No MTVC.
06 14 59 34 LMP ... 2 -
06 14 59 36 LMP Mark.
06 14 59 38 LMP 2 YAW -
06 14 59 39 LMP Mark.
06 14 59 43 LMP Set.
06 14 59 50 LMP MTVC - NEUTRAL. Return to zero.
06 14 59 55 LMP No MTVC.
06 15 00 00 LMP AC/DC.
06 15 00 03 LMP MAIN A/MAIN B.
06 15 00 07 LMP RATE 2.
06 15 00 16 LMP ATT 1/RATE 2.

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06 15 00 22 LMP Two, minus 2, 0. Minus 2, and 0.

06 15 00 32 LMP ...

06 15 01 15 LMP Where were we? Gimbal drive test complete.

06 15 01 17 CMP Complete.

06 15 01 18 LMP FDAI SCALE, 5/5.

06 15 01 20 CMP 5/5.

06 15 01 22 LMP CYCLE, OFF.

06 15 01 23 CMP LIMIT CYCLE's OFF.

06 15 01 24 LMP RATE, HIGH.

06 15 01 25 CMP RATE, HIGH.

06 15 01 26 LMP Update the DET.

06 15 01 27 CMP Updated and set. There you go.

06 15 01 32 CMP Should get the ground shortly -

06 15 01 47 LMP Time is 19 seconds.

06 15 01 49 CMP All right. No trim and 1 second.

06 15 01 54 LMP Shutdown rule.

06 15 02 36 CMP We should have AOS.

06 15 02 41 LMP A NORMAL - armed.

06 15 03 22 LMP Watch the clock.

06 15 03 29 CMP Houston, Apollo 12. We're standing by for the burn.

06 15 03 38 CMP Okay, good show.

06 15 03 50 CMP Okay.

06 15 03 55 LMP ... thing seems to have worked pretty good.

06 15 03 57 CMP It sure does. It keeps me right in there with that last burn I had.

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06 15 04 08 CMP 12; Roger.

06 15 04 10 LMP DSKY blank.

06 15 04 17 CMP EMS to AUTO.

06 15 04 32 CMP All right.

06 15 04 34 CMP Have an ullage?

06 15 04 36 LMP You look GO.

06 15 04 37 CDR Yes. Just beautiful for us, ought to be a GO.

06 15 04 42 CMP Good.

06 15 04 45 MS ...

06 15 04 46 CMP ... B bank.

06 15 04 48 CDR We got B bank, also.

06 15 04 50 CMP Okay. All right, that's good.

06 15 04 53 CMP Seven seconds, 8 seconds. A little oscillation in LOW; it's okay.

06 15 04 58 CDR Everything looks good here.

06 15 04 59 CMP Still okay. 15, 16, 17, 18 -

06 15 05 04 CMP SHUTDOWN.

06 15 05 05 CDR All ball valves off.

06 15 05 07 CMP A and B, off.

06 15 05 09 CDR PITCH.

06 15 05 10 CMP And YAW.

06 15 05 11 CDR GIMBAL MOTORS. Go.

06 15 05 12 CMP 2, mark -

06 15 05 13 CDR OFF.

06 15 05 14 CMP 2, mark -

06 15 05 15 CDR OFF.

06 15 05 16 CMP 1, mark -

06 15 05 17 CDR Go.

06 15 05 18 CMP 1, mark -

06 15 05 19 CDR Okay, we got them all. We're coming off with a main vent line.

06 15 05 28 CDR Okay. Houston. Minus a half, plus - -

06 15 05 31 CMP Wait a minute, wait a minute, wait a minute - -

06 15 05 32 CDR - - 82 - -

06 15 05 33 CMP One more minute, Pete. ...

06 15 05 36 CDR Wait a minute, Houston. Let me get an attitude.

06 15 05 39 CMP Okay, there you are.

06 15 05 40 CDR Okay. Minus 0.6, plus 0.2, plus 0.7.

06 15 05 51 CMP And the EMS is minus 11.3.

TIME SKIP

06 18 12 52 LMP ... all sides to ...

06 18 12 54 CMP Yes, that's the ... Fra Mauro.

06 18 12 57 LMP Hey, it seemed to me the best way to do it the other day - It was one guy getting out that window - one guy getting out there, and they both have a chart - okay - no wait - -

06 18 13 04 CDR Hey, what - -

06 18 13 08 SC I - I don't know.

06 18 13 09 SC I - I've got some of those Actified - -

06 18 13 11 SC That's great, it says decongestant - -

06 18 13 13 SC I've got some of those antihistamines somewhere.

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06 18 13 15 SC ... aspirin ... aspirin tablets.

06 18 13 19 SC You got some ..., Pete?

06 18 13 33 CDR ..., ENABLE; POWER, OFF; OMNI -

06 18 13 40 CMP Hey, did we ever chlorinate the water last night?
We did, didn't we?

06 18 13 42 CDR No, we didn't.

06 18 13 46 LMP Did you do it the last couple of nights?

06 18 13 49 CMP I did it the night before last.

06 18 13 51 LMP Okay.

06 18 13 55 CDR Wonder what this decongestant has -

06 18 13 58 CMP It clears your head.

06 18 14 00 LMP Magazine R. The great magazine. Magazine R --

06 18 14 09 CDR Well, shit, I'll let them figure out on the ground
I got a cold, I ain't going to tell them. I'll
tell them I took the pill - CDR took one --

06 18 14 15 LMP ... 65 --

06 18 14 16 CDR -- decongestant or 10 or whatever it is.

06 18 14 20 LMP 165. Okay, I'm just going to put this back.

06 18 14 25 CDR How did I get the world's greatest cold on the Moon,
for Christ's sake?

06 18 14 29 LMP Because you had the world's greatest LMP with you
at the Moon.

06 18 14 32 CDR Who had a cold. And I kept bullshitting Houston
and saying "Aw, ..., it's just stuffy up here."

06 18 14 40 LMP That's the way to play it, though.

06 18 14 42 CDR And Al Bean was - That's right, that's the way I
got to play it right now. I'll tell them I took
the decongestant, but I ain't got a cold, like -
(sneeze) Nothing, let them figure that.

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06 18 14 53 LMP How come you're taking 24 minutes to track it, and I'm only taking 8 minutes of pictures?

06 18 14 58 CMP ... tracking.

06 18 15 01 CDR I'm just reading this shit right here.

06 18 15 10 LMP Oh. It's six frames a second, 1-1/2 magazines, 24 minutes of film. That's why he's doing it.

06 18 15 18 CDR What's he telling you? Oh, is that what he's trying - Try one of those ...

06 18 15 23 CMP Well, I don't see why - -

06 18 15 24 CDR So you know how much film you got, how long it will last, how many minutes.

06 18 15 28 CMP - - ... must be at least six frames. Must be at least ... in there and somebody will want to know it, so ...

06 18 15 31 LMP I guess so. They don't know what the assignment is, and what they do, they want to let you know what the film capability is. Okay, I'll get on with the film, now.

06 18 15 40 CDR Are we on the back side of the Moon yet?

06 18 15 41 LMP Yes.

06 18 15 42 CMP We're in the dark.

06 18 15 43 CDR Can I dump?

06 18 15 46 LMP No, we're in - we're AOS.

06 18 15 47 CDR LOS?

06 18 15 54 LMP ... sound.

06 18 15 55 CDR Oh, shit! I keep forgetting to get my rag for these goddamned pissers.

06 18 16 00 LMP ... - -

06 18 16 01 CMP Hey, what the hell difference does it make to those guys where you dump?

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06 18 16 03 CDR They can see it on their MSFN data.

06 18 16 05 CMP Well, what - -

06 18 16 06 CDR Well - -

06 18 16 07 LMP Maybe they want to - -

06 18 16 08 CMP Tell me what difference it makes.

06 18 16 09 CDR All right. When you come out on the front side, they pick you up and they track you all the way across, and they can project ahead. Okay, if you dump on the back side, you ... pop at it just like PDI, and you're not where you're supposed to be.

06 18 16 20 CMP So?

06 18 16 21 CDR They - then - then, they have your error. Right there, they'd know what the error was you put in. Apparently, it doesn't do that. It just freaks up the way their processors work. If you - -

06 18 16 34 LMP I think that's what it does.

06 18 16 35 CDR - - disturb it during their tracking - -

06 18 16 39 LMP ... point - -

06 18 16 40 CDR - - - - The main thing is that the processor assumes that you're not making any DELTA-V. If you make it on the back side - -

06 18 16 48 CMP Yes, that's right.

06 18 16 50 CDR - - it can account for it.

06 18 16 51 CMP You're right. That's right. Let's forget all about it.

06 18 16 53 LMP ... good way ...

06 18 16 58 CMP They don't need that information.

06 18 17 00 CDR Oh, yes. What they - what they - -

06 18 17 01 CMP Going home.

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06 18 17 02 CDR Oh, well, that's what - why they want that information.

06 18 17 05 CMP Going home.

06 18 17 06 LMP That's why they really need it - -

06 18 17 07 CDR They - they start that long range - -

06 18 17 09 LMP - - ... midcourse or something.

06 18 17 10 CMP We could burn this - -

06 18 17 11 CDR - - long range.

06 18 17 12 CMP - - TEI PAD to REV 43. ... - -

06 18 17 15 CDR Wouldn't that fool the shit out of them? Come whistling out from behind the Moon and say, "Well -

06 18 17 20 LMP I want ... here - -

06 18 17 21 CMP What?

06 18 17 22 CDR How many?

06 18 17 24 CMP Ninety hours.

06 18 17 26 CDR No, the - Oh, 90 hours from now. How many hours to TEI? Shit, I'll be dead by then with this cold, the way it's coming on. They come on fast and go away slow.

06 18 17 52 LMP I'm going to take some of the best pictures you've ever seen, Dick Gordon.

06 18 17 55 CMP Good.

06 18 17 56 CDR Hey, are we recording on tape out there, Al?

06 18 17 58 LMP Yes, sir.

06 18 18 03 CDR (Clears throat)

06 18 18 04 CMP Really pisses me off about this.

06 18 18 08 CDR Hey, what was - -

06 18 18 09 LMP ... - -

06 18 18 10 CDR - - when you ..., let me look..

06 18 18 12 CMP I can do better than that.

06 18 18 14 LMP You been - you been working out there, you ...

06 18 18 16 CMP ... I kept saying to myself, that doesn't look quite right. ... - -

06 18 18 21 LMP The time is going, and you can't afford to not take a chance. You really - you just kind of leave it like it says. Because you know, if you don't make your move, you blow it, and you'll say that was the thing.

06 18 19 20 CMP You have 9 more seconds if you'll shoot.

06 18 19 25 LMP ... - -

06 18 19 26 CDR You wrecked it ... - -

06 18 19 27 CMP ... give you guys an opportunity to look.

06 18 19 28 CDR We're going to sit here for two REV's and - -

06 18 19 29 LMP Okay.

06 18 19 30 CMP Be ORB RATE - -

06 18 19 31 CDR - - This is ridiculous.

06 18 19 32 CMP - - ... - -

06 18 19 33 CDR Freaking son of a bitch. Mumble, mumble, mumble, words -

06 18 19 37 LMP What are you looking for, Pete?

06 18 19 38 CDR Just looking at what you're doing.

06 18 19 40 LMP I just want to make sure that this agrees.

06 18 19 42 CDR Yes.

06 18 19 43 LMP Make a photo ...

06 18 19 44 CDR Yes, yes.

06 18 19 45 LMP Acquire MSFN; PITCH, MINUS 64.

06 18 19 50 CDR All right, Dick. You had your one error now; for Christ's sake, you better get Fra Mauro and Descartes.

06 18 19 56 LMP He'll get them.

06 18 20 00 CDR Because I'm going to take that big map here and check your ass.

06 18 20 03 CMP I had my error because I didn't read this freaking time they gave me, that's why I had my error.

06 18 20 07 CDR That's right.

06 18 20 09 CMP I didn't think about it.

06 18 20 19 LMP Here we go. Okay, hand me - that P30 PAD, Pete. ... done more than this.

06 18 20 31 CDR Hey, I'll tell you what, instead of taking the pencil, take this pen and that'll make dark lines just like this.

06 18 20 46 CDR What's that?

06 18 20 51 LMP Fuzzo.

06 18 20 52 CDR Fuzzo, that's a - that's what is known as a foo-foo.

06 18 20 57 LMP Now - now, prior to we go GPI, are we going to get any more than that?

06 18 21 01 CDR TEI?

06 18 21 02 LMP Yes, ... I.

06 18 21 03 CMP We'll get the full P30 rate - -

06 18 21 04 CDR We'll get the ΔV_T to burn time, ...

06 18 21 07 LMP We'll get all of it. - -

06 18 21 09 CDR ... last long. I don't think we'll get a high ... from TEI.

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- 06 18 21 14 LMP You might. Why don't you put it on there, it won't hurt. ...
- 06 18 21 31 CDR We only have 20 feet a second left over, huh?
- 06 18 21 37 CMP Not much margin, is it?
- 06 18 21 40 LMP Wouldn't be worried about an overburn, would you?
- 06 18 21 42 CDR Shoot, underburn.
- 06 18 21 44 CMP How about burning depletion?
- 06 18 21 46 CDR Couple of hundred feet per second. ...
- 06 18 21 56 CMP Which crater did you guys go to? You landed right there. You're at the head crater.
- 06 18 22 03 CDR We landed nearly right there. We walked over and looked in that one - at the first EVA when --
- 06 18 22 08 LMP Yes.
- 06 18 22 09 CDR -- we deployed the ALSEP.
- 06 18 22 10 LMP Yes.
- 06 18 22 11 CDR The next day we went to head crater --
- 06 18 22 12 LMP Right there.
- 06 18 22 13 CDR -- and then we went over to this one, and we went to another one up there and then we came back by the far side of this one again, and we viewed Surveyor crater and all the way around that son of a bitch and back here.
- 06 18 22 24 CMP Was this a pretty deep --
- 06 18 22 25 CDR About a mile.
- 06 18 22 26 CMP Was this a pretty deep one?
- 06 18 22 27 CDR Yes.
- 06 18 22 28 CMP Was it a big crater?
- 06 18 22 29 CDR Yes. That's - that's - that's - a fairly large one.

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06 18 22 43 LMP I tell you, we'll have to take ... of this one so we can see what this one --

06 18 22 47 CMP What ... you taking?

06 18 22 48 LMP ...

06 18 22 49 CMP Is that right?

06 18 22 50 LMP Yes.

06 18 23 10 CDR (Clears throat) Go back one picture.

06 18 23 17 LMP I'm playing your tape --

06 18 23 18 CDR One more.

06 18 23 19 LMP -- and you've got it, Dick Gordon.

06 18 23 23 CDR Yes. That's just - just what I saw. When I saw where we were, all I saw was 1, 2, 3, 4, that one over there and that Snowman, and I didn't see another freaking thing. Sure did. It looked just like it - You know, I looked up there and saw all these goddamn things and said, "Shit, where am I?" And then all of a sudden - Whammo! It just - it leaped out like a neon sign.

06 18 23 47 CMP Get the longitude, because I've found (clears throat) everytime I come across, if I find ...

06 18 23 55 CDR Yes.

06 18 23 56 CMP ... and make an I, I can find the Snowman. I couldn't find these - this - you got to find this line here first, you know. Kind of a strange longitude.

06 18 24 08 LMP It sure is.

06 18 24 16 CDR The ... or something.

06 18 24 20 CMP Right over here; what's the first one? Descartes's the first one.

06 18 24 38 CDR All right. I'll tell you what, let's - What's the map update? Let's start - We have the ... all we need is the meridian.

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06 18 24 45 LMP No. 180 is the meridian is at 162:38.

06 18 24 50 CDR 162:38. 162:38, we've got 14 minutes on that. Start a clock at 14 minutes. Why is the O₂ - I know why the O₂ HIGH comes on - here it comes.

06 18 25 09 LMP ...

06 18 25 12 CDR You left sleeper on.

06 18 25 25 LMP Okay. Let's look at this thing, because we're going to run out of - I've only got four more lines at the bottom of this PAD.

06 18 25 31 CDR ...

06 18 25 33 LMP According to Hoyle, down to seconds. ... DA and - Now, you think that'll be on this?

06 18 25 37 CDR No.

06 18 25 38 LMP How about that?

06 18 25 39 CDR No.

06 18 25 40 LMP How about that?

06 18 25 41 CDR No.

06 18 25 42 LMP How about any of that?

06 18 25 43 CDR No.

06 18 25 44 LMP Okay. Well, then I'll just start --

06 18 25 45 CMP ... like a P30 PAD. It'll be okay.

06 18 25 47 LMP Okay.

06 18 25 48 CMP Down to the boresight star.

06 18 25 51 LMP Okay. That's what I wanted. None of this other.

06 18 25 52 CDR Now, look.

06 18 25 53 LMP How about the SEP card?

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06 18 25 54 CDR Where - where is your, where's your - where's your -
06 18 25 56 CMP ..., Pete.

06 18 25 57 CDR No, wait just a second. Where's your - the one we
just burned?

06 18 26 04 LMP We can't - Oh, I know what you're saying.

06 18 26 07 CDR Just look at a regular one that we've burned; see.
And it'll tell you exactly what to ... Take LOI,
wherever the freaker is, SPC 2. That's a LOI
minus 5. There, you got it? I'll bet you a dollar
the TEI comes out that way. It is; it's going to
come out with the LAT/LONG - -

06 18 26 34 CMP It's going to come out with the whole ... You
know that?

06 18 26 40 LMP Well, I'll just go down to the end of it and jump
over there. That's life, pure and simple.

06 18 26 46 CDR Yes, it is.

06 18 26 54 CMP Where's your-target-of-opportunity map? I'd like
to look at Descartes.

06 18 27 12 LMP Well, we can get it all on there, if you'll just
put it down here.

06 18 27 18 CDR ... - -

06 18 27 22 CMP I got it.

06 18 27 26 LMP That would be an awful thing, wouldn't it? Go for
4 days without COMM and trail in there to the
second at ... 5g. ... the SEXT stars all up. Is
that on that PAD?

06 18 27 44 CDR Yes, you can - -

06 18 27 45 CMP Yes, it'll be here - -

06 18 27 46 CDR - - SEXT star. It'll be the one with the writing.

06 18 27 48 LMP ... do it. SEXT - stars. R aligned - P aligned -
Y aligned. ... right out the window.

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- 06 18 28 38 LMP ... can't add the numbers in.
- 06 18 29 05 LMP Wish you'd - Hey, Dick Gordon, I'm playing it. I --
- 06 18 29 10 CMP Oh, okay.
- 06 18 29 12 CDR I don't know. Has Dick Gordon got a tape right there handy?
- 06 18 29 14 CMP I don't know where it went to.
- 06 18 29 16 LMP I just wanted to play it.
- 06 18 29 18 CMP Where is my tape?
- 06 18 29 19 LMP Oh, you got to be kidding me --
- 06 18 29 20 CMP What?
- 06 18 29 21 LMP ... right there.
- 06 18 29 22 CMP Right where? I haven't seen it for a while. It was in there - maybe I've got it here.
- 06 18 29 34 LMP I'm going to pick that up before something happens to it. ...
- 06 18 29 44 CMP I don't know where my tape is; it's up there somewhere, I guess.
- 06 18 29 48 LMP I'll be ...
- 06 18 30 08 CMP Jesus Christ! Here's another earpiece. Who's the hell is that?
- 06 18 30 11 CDR It's probably mine. I --
- 06 18 30 13 CMP -- ... freaking earpieces?
- 06 18 30 14 CDR They must have put 400 earpieces in.
- 06 18 30 16 CMP PC - Pete Conrad.
- 06 18 30 18 CDR Yes, sir. Every goddamn earpiece - I keep throwing them in the garbage (laughter) and they keep getting back out of the bag.
- 06 18 30 25 LMP Here's the extra ... How about that?

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06 18 30 30 CMP Got to have an earpiece to it.

06 18 31 11 LMP Not hearing it.

MUSIC

06 18 33 22 CMP Are my tapes ...?

06 18 33 26 CDR What?

06 18 33 28 LMP Did you find my tape?

06 18 33 35 CDR What? No, I don't know that it's not there. I just didn't look. I ...

06 18 34 02 CMP What's all those T₁ times?

06 18 34 10 CDR Descartes, 163:29:12.

06 18 34 31 CDR No, I was looking for the map update at a different time.

06 18 34 34 LMP There goes Fra Mauro.

06 18 34 37 CDR Map update. 162:38:38. 162:38:38.

06 18 35 36 LMP Okay. Now, here's the PAD. Now, let me show you I made - a mistake here. I started to write in some numbers. I'll copy the PAD anyway. So, I'll have to write over those numbers with other little numbers and keep going. And it looks exactly like this PAD ... and I'll copy it. So, why don't I make - why don't I make another one now, while we're choo-chooing around? Especially when I am. Turn over and make one on the other side. ... good place ...

06 18 37 53 LMP I'm going to clean those critters this morning.

06 18 38 23 CDR How many batteries have we got left? Anybody know?

06 18 38 28 LMP I'd guess about three.

06 18 38 30 CMP Three?

06 18 38 31 CDR Three?

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06 18 38 32 LMP We might have, but I don't know; we probably ought to inventory. I'll do that later today.

06 18 44 30 LMP Okay, we've got two homemade PADs. Illegible.

06 18 44 36 CMP ... put them in the ...

06 18 44 39 CDR Maybe they didn't figure we were going to get that far, maybe that's why it doesn't have any P30s.

06 18 44 43 LMP I thought that looked screwy.

06 18 44 44 CDR ... (laughter).

06 18 44 46 CMP They're full up. What is this?

06 18 44 49 CDR That's the one back.

06 18 44 50 CMP Nothing for me?

06 18 44 51 LMP That was the one - no - that was the one back.

06 18 44 52 CDR No, that's - that is - that is TEI.

06 18 44 54 LMP When I get a TEI back, I'll copy it.

06 18 44 58 CDR What REV are we on anyway? Huh? What REV are we on?

06 18 45 02 LMP Well, I - -

06 18 45 03 CDR Forty-one? And we just started 42?

06 18 45 06 CMP Okay.

06 18 45 07 CDR Wait a minute; I've got all kinds of pencils here. Who's lost one?

06 18 45 12 CMP Al Bean lost one.

06 18 45 13 LMP No, he found it. I'll tell you what I have lost.

06 18 45 16 CDR You don't have - Hey, these both look like lunar surface ones.

06 18 45 18 LMP Hey, one of those might be mine. Have you got yours, Dick?

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06 18 45 22 CMP What?

06 18 45 23 LMP Pen?

06 18 45 24 CMP Yes.

06 18 45 25 LMP Figure out - -

06 18 45 26 CDR Which one's mine? - -

06 18 45 27 LMP - - which one's yours?

06 18 45 28 CDR I don't know; I have no way to figure. Just give me one.

06 18 45 31 LMP Say! Hey, I didn't lose it.

06 18 45 33 CDR ... good news.

06 18 45 42 LMP Okay, we've got the PADs under control now. What's the next job? I've got a couple of sick PADs here.

06 18 46 01 CDR You ought to quit drawing on the screen ... We could read them ... they ought to furnish a screen like that one, ...

06 18 47 06 CDR Boy, that's a great song. What the hell's the name of it?

06 18 47 17 LMP That ... is doing okay.

06 18 47 44 CDR Where's my ...?

06 18 47 46 CMP You know, it seems like I'm doing this son of a bitch just too much around here on certain days.

06 18 47 59 LMP Hand me the tool, would you, Dick?

06 18 48 02 CMP Do what?

06 18 48 03 LMP Tool E.

06 18 48 05 CMP Pete, can you put tool E down there?

06 18 48 06 CDR Yes.

06 18 48 08 LMP ... always ...

06 18 48 13 CDR I got to get this junk out of here.

06 18 48 14 LMP That may be the answer.

06 18 48 16 CMP Just get the tape down, would you?

06 18 48 18 LMP Oh, yes. Here it is, right here.

06 18 48 21 CMP ... parts off.

06 18 48 27 CDR Can't help you there.

06 18 48 39 LMP Get this junk here. You get that one, and I'll get this one.

06 18 48 50 CMP Not too bad today.

06 18 48 52 LMP I've already cleaned it once today.

06 18 48 54 CMP Oh, you already have, no wonder. Pretty good. Doesn't have anything on it here.

06 18 49 03 LMP Good. Oh, shit - sorry.

06 18 49 42 CDR Look at that son of a bitch.

06 18 49 44 CMP What's that?

06 18 49 45 LMP I don't see it.

06 18 49 46 CDR Yes. Right there in the pre-TEI systems checks.

06 18 49 49 CMP That already ...? Shit, you guys could be doing that while I'm tracking.

06 18 49 53 LMP Hell, yes.

06 18 49 54 CDR Yes, yes.

06 18 49 55 CMP There's nothing there.

06 18 49 56 LMP Besides we can be - In fact, it's early.

06 18 49 58 CMP Could do - -

06 18 49 59 LMP What the hell are they going to give you - a NO-GO?

06 18 50 00 CMP You could do those pre-TEI system checks right now.

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06 18 50 02 LMP That's right, what's it going to do? If you got a bad system, you want to go home more (laughter). That's ridiculous.

06 18 50 09 CDR (Laughter) You know, it's really funny. We just ... - -

06 18 50 12 LMP We're NO-GO for TEI. - -

06 18 50 13 CDR - - the ECS system is NO-GO for TEI.

06 18 50 17 CMP It'll work in lunar orbit, but it won't get you home.

06 18 50 22 CDR We'll get it.

06 18 50 26 CMP Oh. Check that - Give me 4 minutes.

06 18 50 28 LMP One burn!

06 18 50 29 CDR All you need is 4 minutes, yes. We'll get a dividend out of it.

06 18 50 35 CMP Herschel.

06 18 50 36 CDR Herschel. That's right. Freak. You know what's going to happen, don't you, Gordon? I'll make a prediction.

06 18 50 42 CMP They'll probably name it Herschel.

06 18 50 43 CDR Not only that. Not only that. But they are going to look at the freaking high REV photography of Herschel, and they are going to make some great discovery.

06 18 50 51 LMP That's right - -

06 18 50 52 CDR ... - -

06 18 50 53 LMP They're also going to decide to land there or something - -

06 18 50 54 CDR - - just like when we photographed the wrong freaking star that - that - that what's-his-name told us to - he says, "I know I can find those two stars. Why don't we get the other in the wrong attitude." "No," he said, "That's where we go uv in that

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spectrum region of the stars." And that - if they don't call high-handed statements, for Christ's sake - -

- 06 18 51 10 LMP Did you really?
- 06 18 51 11 CMP Yes. ...
- 06 18 51 14 CDR I read all of his reports, too. It didn't say anything about us photographing the wrong one.
- 06 18 51 18 LMP Oh. Is that right?
- 06 18 51 19 CDR I couldn't see. And Dick was standing outside, because, hell, with all those ..., you know, you turn the camera on and off.
- 06 18 51 36 CMP Oh, here comes the sunshine. Off to my window - pane.
- 06 18 52 01 CDR I'll tell you, that one-sixth g was really great. And you need a goddamned ... with you. If you're standing on the floor and you want to go sit on the engine cover? You just go (whistle) (hum) - -
- 06 18 52 11 LMP The things you couldn't reach. - You - you know ... and that PLSS - -
- 06 18 52 13 CDR You'd just go - -
- 06 18 52 14 LMP - - didn't that PLSS feel great?
- 06 18 52 15 CDR - - you'd just go (whistle) and grab it, and you'd fall right back down gently. Al would say, "Hand me my PLSS." And you'd reach over and you'd pick that - -
- 06 18 52 22 LMP One hand - -
- 06 18 52 23 CDR - - son of a bitch up like - (laughter).
- 06 18 52 24 LMP Hey, I'll tell you what we need. With that PLSS on and your suit on, you were better than just your suit on in one g. Didn't you think so?
- 06 18 52 32 CDR Oh, yes. Oh, yes - -
- 06 18 52 33 LMP Freak, you can run and - -

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- 06 18 52 36 CDR You know me; I hate to run. Shit, that's all I was - did was - -
- 06 18 52 39 LMP You can't walk up there. You got to run. There's no way you can walk. And you have to bounce. You land flatfooted like this. You see, you can't bend your knees. So, you land flatfooted like this and you go boing.
- 06 18 52 50 CMP That's why your PLSS comes in handy.
- 06 18 52 52 LMP Yes. And so, then, you - so that means you can take turns, but you have to have your center of gravity over your - over your foot. So you end up going - rocking from side to side. It's real funny; you go like this - way over. Because, when you come down, you'll - -
- 06 18 53 05 CDR ... go bong, bong - -
- 06 18 53 06 LMP - - center of gravity. And - and it's fun. You can run up hills and everything else.
- 06 18 53 10 CDR Except I noticed, we didn't get too speedy coming up out of that Surveyor crater.
- 06 18 53 14 LMP Yes, because - because we kept running on the edge. We didn't just hit one. We - You can't - We all - Here's how we were running, coming out of that Surveyor crater. You can't do that. So, it just took one high bounce to get us up ... high ... If you don't go up all the way on it, coming down ...
- 06 18 53 59 CMP That's too bad that cotton-picking TV didn't work after all that effort.
- 06 18 54 04 LMP Hey, I'll say it is. I'd have loved to show them that Surveyor. We could have pointed at it ... - that Surveyor.
- 06 18 54 10 CDR We could have pointed out the ALSEP, too, because even at 400 feet, it looks like you're - -
- 06 18 54 15 LMP Yes.
- 06 18 54 16 CDR - - standing over there.
- 06 18 54 17 LMP Yes.

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- 06 18 54 18 CDR They could probably have seen that whole ALSEP thing. When they found Al Bean freaked it up, oh.
- 06 18 54 22 CMP Heard you freaked up.
- 06 18 54 23 CDR Oh, you didn't freak it up.
- 06 18 54 24 LMP I'm telling you, I suspect I did. I - -
- 06 18 54 25 CDR No - -
- 06 18 54 26 LMP - - can't figure out it ever did anything else.
- 06 18 54 28 CDR Al, you didn't do it. God damn it!
- 06 18 54 31 LMP There ain't nothing I could do - if I did.
- 06 18 54 35 CDR If you - if you did, they sure as shit didn't give you adequate warning that - They - they should know that the LM structures are too bright for that sunlight, and they should have told us. Christ's sake, I didn't - I - stopped down to f:22; I would have thought you could have shown it on anything except directly into the Sun.
- 06 18 55 00 LMP Well, we'll have to see what happened.
- 06 18 55 04 CDR I'm really - I got the lunar crud. I really do. I -
- 06 18 55 19 LMP Hey, make sure that thing is stopped down. The low setting is 2.2. The high setting is 22. And you can't tell the difference hardly. I never saw the freaking camera.
- 06 18 55 32 CDR I don't know what they had it set on for - course - -
- 06 18 55 35 LMP Probably 2.2.
- 06 18 55 36 CDR Theoretically, I was in the shadow, you know.
- 06 18 55 41 LMP That's right. Because, if I had it on 2.2 -
- 06 18 55 43 CDR I got to get the gimbal angles on that ... Man, I yawed that bastard around about 35 degrees; I pitched; I rolled. I was really wheeling and dealing.
- 06 18 55 54 LMP Hey, there they come.

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06 18 56 00 CMP Hey, there we go.

06 18 56 04 CDR You know what it'll turn out to be? I yawed 5 degrees and rolled 5 degrees.

06 18 56 09 LMP That's ... probable.

06 18 56 10 CDR Exactly.

06 18 56 13 LMP God, this is weird.

06 18 56 15 CMP Isn't that a spectacular sight, that sunrise?

06 18 56 18 CDR It's unreal.

06 18 56 20 CMP Like it's a different world.

06 18 56 23 CDR If you saw that in the movies, you would say, "God, that's fakey." That's just what I saw as we were burning LOI.

06 18 56 41 CDR I think you can see what I saw out the window. If you get real close to this, it's about as big as a - except it was black. It was real funny. It looked like that Moon - it looked like that Moon was right outside that window, but it was just black - -

06 18 56 55 LMP ... - -

06 18 56 57 CDR PDI. Haven't I showed you. I mean, not PDI but - when - when Dick had us on the nose.

06 18 57 03 LMP Oh, yes.

06 18 57 04 CDR And when you were sitting sideways - I could see all these stars out that window. And, all of a sudden, it just was black. In fact, it was like that ... thing - It's like somebody in the simulator put a - a ..., and they had had a - one that was too small - you know, the - the sphere was too small.

06 18 57 19 CMP That's exactly what I think. It's not but 70 degrees over the flight path.

06 18 57 26 LMP Hey, look at that crater over there, Pete.

06 18 57 28 CDR Wait. Where?

06 18 57 29 LMP Look at that son of a bitch. I ought to take some views of that - both sides. It looks like a little Copernicus, see?

06 18 57 35 CDR Yes. Look at that - -

06 18 57 36 LMP ... - -

06 18 57 37 CDR - - find out what it is.

06 18 57 38 LMP It's a mama mia.

06 18 57 39 CDR Jeez!

06 18 57 40 CMP Here. I got it.

06 18 57 44 LMP No. He doesn't have any; it's on the back side.

06 18 57 46 CDR ...

06 18 57 48 LMP I bet he has some Russian name. Now you can see the - -

TIME SKIP

06 20 11 26 CMP Fifteen.

06 20 11 28 CDR Roger. See you at 58. We'll dump to 15.

06 20 11 31 LMP Hey, Dick? ... same side as the ...

06 20 11 38 CMP ...

06 20 11 46 CDR Man, that engine - that full-increase deal worked perfectly.

06 20 11 51 LMP It did, didn't it? Where is it now? It's still ... - -

06 20 11 54 CDR 180 degrees.

06 20 11 56 CMP ... after the burn, it'll be zero.

06 20 11 58 LMP I bet it will be; I bet it will be.

06 20 12 02 CDR There they go. By-by.

06 20 12 04 LMP By-by, Houston. I got to go pee again.

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06 20 12 28 CDR Hey, Al?

06 20 12 29 LMP Yes, sir.

06 20 12 30 CDR You want to grab tool E and start dumping that water?

06 20 12 32 CMP I'll get it. I'll get it, Pete. Let Al - -

06 20 12 34 CDR Okay.

06 20 12 35 CMP - - fool with those cameras. He's got to - -

06 20 12 36 CDR Yes, take a leak.

06 20 12 37 CMP - - ... camera up for him.

06 20 12 38 CDR Waste water's up to 70 percent.

06 20 12 48 CDR Yes, we'd be better off if we operated two cameras.

06 20 12 52 LMP Yes, we got to set them up down here. Because this way we can all - Here's the problem. We're not - Now, look at that, we never could get all that - P50 done in one run. You'll have one run of it, and then you'll run one through your camera, and you'll be aiming to shoot straight down; you can use the P50 and pick up the other stuff - stuff on the left, of course. I'll try to get this stuff to right, of course, for the P50 ...

06 20 13 28 CMP I'll get it, ...

06 20 13 29 LMP ...

06 20 13 42 CMP ... down there. That's good.

06 20 13 48 CDR Huh? Why don't you grab it?

06 20 13 54 CMP ... Brand new ...

06 20 14 02 CDR What's the matter?

06 20 14 03 CMP Did you take that - did you take that filter off the camera?

06 20 14 06 LMP Sure did. It snapped right off. Yes - yes, they're supposed to be used to prepare ... if you need them.

06 20 14 19 CDR That's why it's crowded down there, Dick, they -

06 20 14 23 CMP What's that?

06 20 14 25 CDR All that shit on the sextant panel.

06 20 14 51 CDR ... - oh, waste water.

06 20 15 09 CMP ... closed. Wait for it to come.

06 20 15 13 CDR Okay.

06 20 15 31 CDR Yes.

06 20 15 33 CMP ...

06 20 15 35 LMP I'm just going to do the P50 there with that magazine, I got to come up with another magazine, and --

06 20 15 41 CDR Yes.

06 20 15 42 LMP -- know that I'm going to use all the film on it. That's going to be the hard part. What do you say, Dick?

06 20 15 50 CMP Well, we had - we only had two rolls of film. That's all we had.

06 20 15 54 LMP We already used a whole bunch. All this is black and white, isn't it? We don't have another black-and-white roll?

06 20 16 00 CMP The only black and white we have is the one we've been using today.

06 20 16 04 CDR Well, as far as I know --

06 20 16 05 LMP ... get them all out. Okay.

06 20 16 06 CDR -- as far as I know, there's three rolls. Now, you only have one more - you only have one more requirement.

06 20 16 13 LMP Okay. Hold up, Pete.

06 20 16 16 CMP Al?

06 20 16 17 LMP Yes, let me get - wait, just a minute, let me get
a - stereostrip. ...

06 20 16 26 CDR O₂ HIGH.

06 20 16 28 LMP I'm just going to ...

06 20 16 31 CMP Yes.

06 20 17 09 LMP Let me have the color one, and I'll try to pull it
out and get the others.

06 20 17 14 CMP Well, shit. Here's one that you got MAGs left on.

06 20 17 17 LMP Well, that's what I mean. I think there's - what
else we got --

06 20 17 20 CMP ...

06 20 17 22 CMP Are we going to use this again anyway, aren't we?

06 20 17 25 LMP Are we? I've taken two.

06 20 17 27 CMP But there's plenty on here.

06 20 17 28 LMP Okay. ...

06 20 17 32 CDR Here's one that's got 15 on it.

06 20 17 35 LMP Fifteen; what length and color is it?

06 20 17 38 CMP ... stick that color one in your bag.

06 20 17 40 LMP ... seems to be missing.

06 20 17 41 CMP LM seems to be white.

06 20 17 45 CDR 45, 35.

06 20 17 47 LMP Oh no, you're right, 165. So we're going to have
to save the black and white then for going away.

06 20 17 52 CDR We'll use this, too.

06 20 17 53 LMP Yes. ...

06 20 17 57 CMP And this has got 60. Now this is what we've been
using on these runs, this -

06 20 18 04 LMP Is that what we been shooting? 60 ...?

06 20 18 07 CMP Hold that a minute.

06 20 18 09 CDR We throw away more freaking ...

06 20 18 11 LMP No, here's the one ...

06 20 18 15 CMP What film is that - what is that?

06 20 18 20 CDR Yes. ...

06 20 18 30 LMP Something's funny -

06 20 18 32 CMP ...

06 20 18 34 LMP Something's funny.

06 20 18 37 CMP Here's one.

06 20 18 38 CDR What the hell is this?

06 20 18 40 CMP This is ..., this one is.

06 20 18 42 LMP Something's funny here.

06 20 18 54 LMP Something's funny ...

06 20 18 59 CMP Getting color on this ...

06 20 19 00 CDR Yes.

06 20 19 05 LMP ..., Dick, is rotate it every time I've run this.

06 20 19 09 CMP Let's put --

06 20 19 10 CDR What have you got on the camera now?

06 20 19 13 LMP Double E.

06 20 19 16 CMP That's a brand new roll, too, isn't it? Man, you got two rolls here haven't even been exposed yet. These two right here.

06 20 19 25 LMP This one's dead. ... something's going wrong with this film. This one's - ... What the - This - this one's gone all the way around to here.

06 20 19 44 CMP ...

06 20 19 49 CDR Wonder why that light won't go out?

06 20 19 51 CMP Which light?

06 20 19 52 CDR That. The dump's been off for quite a while. All the fuel cell purges are - -

02 20 19 59 CMP ...

06 20 20 00 CDR - - complete.

06 20 20 01 LMP Yes, they look all right. I need to make a check.

06 20 20 02 CMP O₂ FLOW is - -

06 20 20 03 LMP Yes.

06 20 20 04 CDR ...

06 20 20 05 CMP Yes. The waste water's been dumped.

06 20 20 06 CDR Oh, there you go.

06 20 20 09 LMP Okay, wait a minute. Let's take ... O₂. Something's screwball here. Look at this. Give me that LOX card over there, Pete.

06 20 20 24 CDR Where?

06 20 20 25 LMP Over beside ...

06 20 20 26 CMP ...

06 20 20 27 LMP Put it back on the damn cottonpicker - ...

06 20 20 32 CMP ...

06 20 20 33 CDR Who is - Oh, is that - Herschel, Fra Mauro, and everything?

06 20 20 37 LMP Yes. But I think it's wrong, because it's up here, ...

06 20 20 40 CMP ...

06 20 20 42 LMP ... we're okay, but let me just check it. ...
Put the dark side in ... toward ...

MUSIC (Lonesome Me)

06 20 21 24 LMP We're okay. ...

06 20 21 26 CMP No, they weren't - it moved.

06 20 21 28 LMP Shit, we've taken more than 50 photos; I've taken - 80 on the last two alone.

06 20 21 35 CDR Take another one.

06 20 21 38 LMP Everything moves.

06 20 21 39 CDR No, but I want to watch this.

06 20 21 46 LMP It moved then. What the freak is going on here?

06 20 21 52 CMP Well, it's working anyway, at least we know that. Can't do anything about it now.

06 20 21 59 LMP At first, I gave it a whack and thought, that's no way to ...; maybe I didn't start off at the right time. ... This thing's - -

06 20 22 06 CMP Are you sure you haven't taken more film on another roll?

06 20 22 09 LMP Huh?

06 20 22 10 CMP Huh?

06 20 22 11 CDR Won't make any difference, they can figure it out when they ...

06 20 22 18 CMP How's the films coming?

06 20 22 20 CDR I've got the clock running; we're about 30 minutes from ...

06 20 22 27 LMP Hey, give me a camera that's had about 100 - let me see that color camera. Where's that one I gave you that had all six of ...

06 20 22 36 CMP It's in there.

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06 20 22 37 LMP Black and white -
06 20 22 39 CMP ... down there.
06 20 22 43 LMP ... something going wrong -
06 20 22 51 CDR Turn it this way.
06 20 23 02 LMP This says we've taken as many as I think we have. This says we've taken up 100, and I guess we've taken about a 100. It says 190 on here.
06 20 23 13 CMP ...?
06 20 23 17 LMP ...
06 20 23 18 CMP ...
06 20 23 24 CMP No, we advanced, there's no film in ... The film's in it; pull it up.
06 20 23 36 CDR Huh?
06 20 23 48 CDR What you - what you taking?
06 20 24 00 LMP ...
06 20 24 05 CDR You been clicking the intervalometer right along?
06 20 24 07 LMP ..., yes.
06 20 24 26 CMP What time's that first ... landmark tracking?
06 20 24 28 LMP Here's the problem.
06 20 24 31 CDR It's moving now.
06 20 24 37 CMP Don't worry about it. We're either on there or we're not.
06 20 24 40 LMP ... Nothing you can do about it.
06 20 24 44 CMP What's - what's my first landmark? Pete?
06 20 24 48 CDR CP-1.
06 20 24 49 CMP Oh, ...

06 20 24 50 CDR I'll get it. CP-1 is 164:52. Got - 27 minutes according to our lower equipment bay clock.

06 20 25 07 CMP Okay. Here's our ...

06 20 25 09 CDR ... time to do DAC.

06 20 25 12 CMP I am.

06 20 25 14 LMP There may be - there may be something wrong with ...

06 20 25 16 CMP That's all right, we've got these two.

06 20 25 18 LMP Let's just use them. Next time, let's ...

06 20 25 22 CMP ...?

06 20 25 23 LMP Lalande. Let's use these two magazines.

06 20 25 25 CMP Where - where's the ... you want for Lalande ...?

06 20 25 28 LMP Whatever else you get --

06 20 25 29 CMP Okay.

06 20 25 30 LMP Okay, that should do it.

06 20 25 32 CMP I'll buy that.

06 20 25 33 LMP ... something wrong with that. ... on the 250 millimeter --

06 20 25 38 CMP It's okay.

06 20 25 40 CDR How's the waste water?

06 20 25 43 LMP Waste water's 15.

06 20 25 44 CMP No, not quite.

06 20 25 46 LMP It's goes on --

06 20 25 48 CDR All right.

06 20 25 49 CMP Huh?

06 20 25 50 CDR Go ahead and turn it off.

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06 20 25 51 LMP ... off.

06 20 25 59 CMP Okay, the potable's open.

06 20 26 02 LMP Didn't, did it?

06 20 26 04 CDR You ought to drop it a little bit more, Dick.

06 20 26 05 LMP Drop it a little more, Dick. That's too ... about 18.

06 20 26 15 CMP ... drop it ...

06 20 26 40 CMP Okay.

06 20 26 41 CDR That's good, Dick.

06 20 27 04 CMP Three more REVs until we get the hell out of here. ...

06 20 27 13 CDR Maneuver by 164:46, Dick. Here's your flight plan, it's complete up to you.

06 20 27 22 LMP ... flight plan ...

06 20 27 23 CMP Yes, I need ... other charts here.

06 20 27 48 CMP Trade places with you. I need to go over -

06 20 27 54 LMP You can have the middle.

06 20 27 57 CMP Oh, okay.

06 20 27 58 CDR Got to have the ...

06 20 28 30 CDR Hey, we ought to get some pictures inside this son of a bitch. We haven't got any.

06 20 28 33 CMP A whole roll.

06 20 28 34 CDR Hey, we - we didn't - we didn't take any views in the LM, did we, Al?

06 20 28 40 CMP A whole roll.

06 20 28 55 LMP Where's the next site, Pete, Fra Mauro? Where's the next site, Pete?

06 20 29 01 CDR/CMP Fra Mauro.

06 20 29 06 CDR That was the last one.

06 20 29 09 CMP Gee, if those pictures aren't any good - As a matter of fact, we've got - I don't know what you're going to use it for, myself.

06 20 29 30 LMP ...

06 20 29 49 CDR Here.

06 20 30 01 CMP ...

06 20 30 03 LMP The very first one.

06 20 30 21 CDR (Cough) Shit, I am really catching a cold. I didn't have it any other time. No, that's better now.

06 20 30 38 LMP Yes. Do we ever make another pass by --

06 20 30 43 CMP Fra Mauro?

06 20 30 44 LMP Fra Mauro, that you're not doing anything?

06 20 30 46 CMP You can't do it - ... You really can't.

06 20 30 52 LMP No way.

06 20 30 53 CDR Hey, you can get it --

06 20 30 54 LMP Here's Fra Mauro, it's got to be on here. Maybe somehow it just didn't ... That thing looks pretty good.

06 20 31 04 CMP ...

06 20 31 06 LMP The thing that keeps us happy a little is that little white one that's way around on the ... side. But when I checked it a minute ago, she was jumping 60 to 62 - ...

06 20 31 36 CMP ...

06 20 31 37 CDR Wait a minute, now. Where is it?

06 20 31 39 CMP Where's what?

06 20 31 47 CMP ...

06 20 31 50 LMP There's 190 on this roll. That's one-third of the way, right?

06 20 31 56 CDR Right.

06 20 31 57 LMP One-third of 190 - -

06 20 31 59 CMP About 60?

06 20 32 01 LMP 60 - 62 - 3 -

06 20 32 17 CMP You know what I've been marking?

06 20 32 19 CDR What?

06 20 32 21 CMP Herschel.

06 20 32 22 LMP Okay. I bet Herschel is on here and I bet the first part of - -

06 20 32 28 CDR Descartes.

06 20 32 29 LMP - - or maybe all of Descartes, I don't know - is on here.

06 20 32 36 CDR Could be.

06 20 32 37 LMP Because I don't remember - I can't honestly say I went around there and looked at this number.

06 20 32 52 CMP ... all on here.

06 20 33 00 CDR Hang on there, you son of a bitch!

06 20 33 09 CMP Whose is this?

06 20 33 11 LMP ... watch it ... go on around.

06 20 33 14 CMP ...

06 20 33 18 LMP I don't think I even dismounted it to see those ... I know I didn't take 60 pictures of Herschel, Pete. Did you have anything on your camera before?

06 20 33 27 CMP Not a thing.

06 20 33 28 CDR You've got to have part of it, at least some of it - maybe you've got all of it.

06 20 33 34 CMP ...

06 20 33 35 CDR I don't want any more.

06 20 33 36 CMP ... get it.

06 20 33 49 LMP ... up there. Could have stopped in the middle, I guess. Okay.

06 20 34 29 LMP Where you going to be working?

06 20 34 33 CMP Right there.

06 20 34 41 LMP Wait a second, ...

06 20 35 48 LMP I'll tell you what. I do remember - one time in the middle of the first one, I looked back ... like ...

06 20 36 08 CMP No, that's probably all right.

06 20 36 09 CDR ... under the couch.

06 20 36 10 LMP But I didn't have time to keep checking it at 6-second intervals. ...

06 20 36 59 CDR The smartest thing for me to do is crawl under the bilge down there and go to sleep for a couple of hours.

06 20 37 06 LMP Why don't you do it?

06 20 37 07 CMP That'll be good, that'll let me move my ... off the couch. What do you want ...

06 20 37 16 CDR The way I feel, ...

06 20 37 27 LMP What's our attitude going to be, Dick?

06 20 37 30 CMP ...

06 20 37 42 CDR ... ought to be changed.

06 20 37 52 LMP Some of these are far from ...

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06 20 37 54 CDR Dick?

06 20 37 55 CMP Yes.

06 20 37 56 CDR Where are those lines, and I'll get them out of your way.

06 20 38 07 CMP ...

06 20 38 12 LMP ...

06 20 38 16 CMP Got two REVs - ..., let's get ready.

06 20 38 27 LMP ... the cryogenics.

06 20 38 30 CMP Two REVs of this -

06 20 38 33 LMP ... cryogenics ...

06 20 38 40 LMP ... in ORB RATE -

06 20 38 42 CMP Yes, ... Okay.

06 20 38 57 LMP There's no way to do that ...

06 20 38 59 CMP Well, you could have just ... pretty soon.

06 20 39 03 LMP Yes, but I can't put that thing ... intervalometer.

06 20 39 06 CMP ...

06 20 39 07 LMP Okay. Now here's what I'll do. Let me look and see what we got to do.

06 20 39 27 LMP Use the 85-millimeter lens on it.

06 20 39 34 CMP Getting hairy out here, too.

06 20 39 35 LMP 125 is the - probably be ... on that stereostrip, you always use the same setting, huh? ... attitude. ... Fra Mauro.

06 20 40 08 CMP ...

06 20 40 10 LMP You could probably - put the ... on ...

06 20 40 13 CMP Oh, yes.

06 20 40 14 LMP Yes, I think I will.

06 20 40 16 CDR ... zero phase, ... of which is 4, 5/6ths, let me - That would be - that would be ... 4 5/6ths.

06 20 40 26 CMP Yes.

06 20 40 28 LMP ... Let me look at this. ... The object is to minimize ... do that, and we want to get the stuff out of the side, too.

06 20 41 16 LMP Okay, here's what I'm going to do. I'm going to shoot the 250 from the right side -

06 20 41 23 CMP ...?

06 20 41 25 LMP No, I just want to see it. ...

06 20 41 28 CMP ...

06 20 41 30 LMP That's right. 250 ... We'll probably write it down in here on ...

06 20 41 43 CMP Okay. ...

06 20 41 45 CDR Get it out this window.

06 20 41 46 LMP Yes, ...

06 20 41 48 CMP ... get it out of mine ...

06 20 41 52 LMP That's right, I'll have eight colored ...; second run, I'll just ... Okay, that ought to get it all right there.

06 20 42 00 CMP ...

06 20 42 04 LMP ...

06 20 42 09 CMP ... a little bit.

06 20 42 11 LMP Oh, well.

06 20 42 12 CMP Quit worrying about it, ... anyway.

06 20 42 23 CMP Okay, well, I'll take this right here, ... give it a mark ...

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06 20 42 41 CDR Cool it, man. Cool it.

06 20 42 49 LMP I'll use this black ...

06 20 43 07 CMP ... (Singing, humming)

06 20 43 15 CDR ... this black and white up here? ...

06 20 43 21 LMP ... black and white ...

06 20 43 25 CMP Well, you could open up another - ...

06 20 43 28 LMP Uh-oh, ... They want color.

06 20 43 35 CMP Yes, but we don't have any.

06 20 43 36 LMP They want color. ...

06 20 43 39 CMP ...

06 20 43 40 LMP We don't even have the color.

06 20 43 41 CMP We got color ...

06 20 43 43 CDR ...

06 20 43 44 CMP ...

06 20 43 49 LMP ... do it in black and white ...

06 20 43 50 CMP Oh, yes?

06 20 43 51 LMP Yes.

06 20 43 52 CDR That all right?

06 20 43 59 LMP ... Use the best we've got.

06 20 44 20 LMP ...

06 20 44 23 CMP 15, 7, and 02.

06 20 44 28 LMP Thirteen more minutes.

06 20 44 40 CMP ... a little tracking time around here -

06 20 44 47 LMP ...

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06 20 45 44 CMP ...

06 20 45 49 LMP You got any bread left?

06 20 45 50 CDR Huh?

06 20 45 51 LMP Got any bread left?

06 20 45 52 CMP ...

06 20 46 05 CDR Maybe we don't have any left. I guess we don't.

06 20 46 21 LMP ... got them all now?

06 20 46 40 CMP What's today, Friday?

06 20 46 48 LMP Why do we care? (Laughter) ... had to update this - What do we care, we ain't going anywhere.

06 20 47 11 CDR Salad?

06 20 47 12 LMP Hum?

06 20 47 13 CDR Salad?

06 20 47 15 LMP It's tuna salad.

06 20 47 16 CMP Tuna salad, chicken salad.

06 20 47 18 LMP What are things like ...

06 20 47 26 CDR I'd like to dig into some of that chow. ...

06 20 47 39 LMP ... a big cocktail. I could use one of those. ... white. ... lot of good chow, you ought to try some of those.

06 20 48 03 CDR ...?

06 20 48 29 CDR You charging battery B?

06 20 48 31 LMP Yes, sir. Look like it's charging okay?

06 20 48 34 CMP ... not bad ... Oh, yes.

06 20 48 40 LMP I don't always leave it there, Dick. I usually - I don't know whether I should or not, to tell you the truth.

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06 20 48 45 CMP It doesn't make any difference; that's just the indicator.

06 20 48 46 LMP That's right, I never - look at it and make sure it's charging like it's supposed to. See if you don't have any - What the hell is that?

06 20 49 01 CMP Ouch! Sticks out there a long way.

06 20 49 06 LMP ... some day. ...

06 20 49 28 LMP Orange grapefruit, that's okay, ...

06 20 49 42 LMP ... I'm really ... Hey, I'll watch this side, Dick.

06 20 49 51 CMP Okay.

06 20 50 00 LMP ...

06 20 51 04 LMP Leave that light on.

06 20 51 05 CDR Huh?

06 20 51 06 LMP Leave it alone.

06 20 51 08 CMP ...? That happens every time I do a P22.

06 20 51 16 LMP Man, that's a ...

06 20 51 37 CDR We give them OMNI B to begin with, I guess. ... high gain antenna ...

06 20 52 01 CMP You still pumping something?

06 20 52 04 LMP ... O₂ FLOW ...

06 20 52 28 LMP I hope they work right for you.

06 20 53 09 LMP ... That's it, I guess.

06 20 53 11 CMP ...?

06 20 53 13 LMP Guess I'd better. ... we always do that ... next few days.

06 20 53 30 CMP ... you're right.

06 20 53 32 CDR ... got that in front of us now. ...

06 20 56 06 CMP ... a lot if it?

06 20 56 09 LMP No, I heard it go every single time. ... here it go. All I could hear ... it'll go without moving. ...

06 20 56 32 LMP You don't have anything on that roll ...

06 20 57 12 CMP ...

06 20 57 38 CMP Yes, ...

06 20 58 52 LMP ...

06 21 00 16 LMP Help you, Dick?

06 21 00 21 CMP Huh?

06 21 00 30 CDR P38.

06 21 00 31 LMP ... shows part of that ... Hey, we are pitching down. Don't ask me why.

06 21 00 38 CDR No, P38. ...

06 21 00 40 CMP ... We're okay. We're ORB RATE.

06 21 00 43 LMP Okay, that's right.

06 21 00 47 CMP In fact, it's a little late. ...

06 21 04 50 CDR ..., babe, ...

06 21 04 53 CMP Landmarks.

06 21 05 09 CDR Oh, look at that!

06 21 05 11 CMP ...

06 21 05 13 CDR Look at that!

06 21 05 15 CMP ..., babe.

06 21 05 19 LMP ... going to be all right.

06 21 05 20 CMP There's nothing else - -

06 21 05 21 CDR You can think about that on the way - -

06 21 05 23 CMP - - ...

06 21 05 25 CDR Everything gets nearer and nearer. ... You know, I think that had a lot to do with a lot of guys ... When you get out here, babe, you ...

06 21 06 18 CDR ... way off ...

06 21 06 52 LMP ...

06 21 06 54 CMP Huh?

06 21 06 55 LMP ...

06 21 06 56 CMP I have. We're still in ORB RATE.

06 21 06 58 LMP Yes. That alignment stuff ... looks okay, still too early. That's Langrenus straight ahead.

06 21 07 09 CMP Langrenus? Ought to be. You get - Hell, that's - get the other one, though. ... - -

06 21 07 15 LMP Yes.

06 21 07 16 CMP ...

06 21 07 17 LMP Behind him is ..., though.

06 21 07 18 CDR Yes.

06 21 07 19 LMP Okay. ...

06 21 07 23 CMP Look at that Earth, look at that Earth. I can't believe that!

06 21 07 26 LMP What?

06 21 07 27 CMP That Earth, I just can hardly believe that.

06 21 07 28 LMP Oh, man! I'll tell you, I wish I had those pictures more than anything. The thing that really fouls you up is the ... - -

TIME SKIP

06 21 23 58 CMP Forty two, MAG F.

06 21 24 00 LMP Yes. This one has that.

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06 21 24 08 CMP Hell, I don't. I'll get them.

06 21 24 12 LMP Okay.

06 21 24 14 CMP Okay, Jerry. Go ahead.

06 21 24 20 CC Okay. These are the ones on page 3-149.

06 21 24 24 CMP Roger.

06 21 24 26 CC The first one is Charlie Papa 1: T_1 is 166:51:23, 166:56:29, north 02. We'll have the LAT/LONG information for you in a few minutes. Charlie Papa 2: T_1 is 167:09:42, 167:14:42, north 14. Delta Echo 1: 167:22:46, 167:27:43, north 02. Foxtrot Mike 1: 167:33:0 - correction 32, 167:38:32, north 12. Over.

06 21 26 01 CMP Roger; we copied CP-1: 166:51:23, 166:56:29, north 02. CP-2: 167:09:42, 167:14:42, north 14. Delta Echo 1: 167:22:46, 167:27:43, 2 north. FM-1 - that sounds like an airplane - 167:33:32, 167:38:32, 12 north. Over.

06 21 26 37 CC That's ... We'll have some other information ...

06 21 26 43 CMP I get the same landmarks with what I'm doing right now, Jerry.

06 21 27 07 CC 12, Houston. We're going to take your NOUN 89s and convert that to your LAT/LONGs for this particular pass. Over.

06 21 27 14 CMP Oh, okay. I see.

06 21 27 31 LMP ...

06 21 30 43 CC Apollo 12, Houston.

06 21 30 47 LMP Go ahead, Houston.

06 21 30 51 CC Roger. On that P22 stuff I just passed up to you, go ahead and use your flight plan LAT/LONGs and mark on the same figures you did on the previous pass.

06 21 31 05 LMP You understand that, Dick?

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06 21 31 06 CMP Yes. Yes.

06 21 31 07 LMP Okay.

06 21 31 11 CMP I do, I do, I do.

06 21 31 12 LMP Okay.

06 21 31 16 CMP Okay, Jer. Understand, we'll mark on the same thing as this pass here.

06 21 31 37 LMP What's that one? Forty-two or 43, I never can remember. Forty-two.

06 21 31 57 LMP Forty-two, MAG. See how the numbers are counting out, Dick. ... they're doing okay. They don't usually go.

06 21 32 13 LMP Okay. The next thing ...

06 21 32 36 LMP Three in a row, big ones.

06 21 33 28 LMP We're in 3. I want that to be right.

06 21 33 44 CMP Hey, Houston; Apollo 12.

06 21 33 49 CC Go, 12.

06 21 33 51 CMP Roger. Do you want me to use the same LAT/LONG that's in the flight plan or the one that I just calculated for P22?

06 21 34 05 CC Dick, use the ones in the flight plan. Not the NOUN 89s.

06 21 34 09 CMP Okay. Thank you.

06 21 38 50 CMP ... on the back side.

06 21 38 52 LMP What was that?

06 21 38 54 CMP Remember to get that battery ... on the back side.

06 21 38 57 LMP Okay.

06 21 42 37 CMP Ohhh! Damn. These four are tough marks.

06 21 42 42 LMP What?

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06 21 42 46 CMP Houston, 12.

06 21 42 51 CC 12, Houston. Go.

06 21 42 52 CMP Hey, Jerry, have the boys check the - the - speed setting on that one. That was a pretty bright target. And I put the film on 1/60th; I think it ought to be about 1/125th. Will you check them on that?

06 21 43 08 CC Roger. Which target was that?

06 21 43 10 CMP This last one, Fra Mauro 1.

06 21 43 15 CC Okay.

06 21 43 18 CMP It's still pretty bright.

06 21 43 19 CC Okay. Dick, while I have you, sometime on the back-side pass here, I think you can expect to see the manifold pressure on the RCS quad C start to dis - decrease, meaning that you've depleted your primary tank.

06 21 43 32 CMP Okay.

06 21 43 33 CC We'd like you to switch to secondary on that quad only. All right?

06 21 43 37 CMP Okay. Secondary on C only. Thank you. I won't switch unless I see them de - -

06 21 43 42 CC Do that just when the manifold pressure starts to decrease - -

06 21 43 45 CMP That's what I was going to say. I won't switch until I see it decrease.

06 21 43 51 CC Good show, Dick.

06 21 44 20 CC 12, Houston. Go ahead. We concur with you on your setting for Fra Mauro.

06 21 44 30 CMP Okay. I'll make it 1/125th on the next pass.

TIME SKIP

06 22 09 51 LMP Okey-dokey.

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06 22 10 10 CMP Houston, 12.

06 22 10 11 CC Go, 12.

06 22 10 16 CMP Okay, Al just put in a comment about starting these a little early. I felt that I had to, because that last mark, the target is going out of sight. That's because our field of view in the telescope isn't as much as it is in the sextant, and I think we'd better start a little bit earlier than 40 seconds after T₂, and I've done that purposely. Any comments?

06 22 11 48 CMP Give me that camera, please. ...

06 22 11 57 CDR Got it?

06 22 11 58 CMP Yes. Just hand it back to me ...

06 22 12 08 CMP Okay. Now you put ...

06 22 12 17 LMP Seemed like we ...

06 22 12 25 CDR ... you'd like ... already. ... quad A ... GDC ...

06 22 12 45 LMP Huh?

06 22 12 46 CDR I think it probably needs to be in ...

06 22 13 14 LMP ... color or black and white ...

06 22 13 48 LMP Did you ... them up?

06 22 13 51 CMP This is ... other things to do ...

06 22 14 03 CDR Huh?

06 22 14 05 LMP Do you have ...

06 22 14 06 CDR ... I keep holding on to the nose of this thing. ...

06 22 14 17 LMP What?

06 22 14 18 CDR It's the ... - the - it looked good. Hold this.

TIME SKIP

06 22 33 00 CDR You've got black and white left ...

06 22 33 02 CMP ...

06 22 33 04 CDR That's what I said was we've got more black and white - -

06 22 33 08 CMP ... that was 16 millimeter. We'll just have to do it without 16 millimeter. ... They want the ... with 16 millimeter, and they want a bunch of photos. You've got this running already, it's ORB RATE. What we need is to get this stuff. ... go to OPTICS, but ... broken ... came apart.

06 22 33 31 CDR Came unglued. But I think I probably screwed up. I think I probably opened it and didn't know it.

06 22 33 35 LMP ... a lot with these things.

06 22 33 39 CMP You couldn't get it back together, though, Pete.

06 22 33 40 CDR No, but that - You know, I don't know anything about these things. Maybe if you got your film loaded, it won't go back together and - I don't know about - ...

06 22 33 49 CMP Where did it come apart? Right here?

06 22 33 51 CDR No, no, no. It's when you move it - when you move it.

06 22 33 56 CMP Oh, on the side. Yes.

06 22 33 59 LMP ... instead of the P22.

06 22 34 08 CMP I think that the P22 is the way to do it, I really do. ...

06 22 34 14 LMP ... stay another REV ...

06 22 34 16 CMP ... stay another REV. We ought to do that. Did you get Lalande the last REV?

06 22 34 19 LMP ...

06 22 34 22 CMP You're right. Let's do that.

06 22 34 24 LMP ... stay for another REV.

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06 22 34 25 CDR Let's do that. That would salvage the whole freaking thing and we would have it all on film.

06 22 34 32 CMP ...

06 22 34 37 CDR Tell them we got to do that. That's right. ... salvage the son of a bitch. Otherwise, we could ...

06 22 34 47 CMP Yes, I think we ought to do ... going to copy P22 and get the right edge.

06 22 34 52 CDR Yes. Tell them we had a camera come apart up here.

06 22 34 55 LMP Yes. You know, too, damn it, we can give them Lalande; we get two of them in one run, and one of them in the last run. Like we were going to do --

06 22 35 04 CMP ...

06 22 35 08 LMP ... you are not reserving it. ... --

06 22 35 15 CDR ... looked at that earlier and you said you couldn't do it.

06 22 35 17 LMP ... No, no ... between Fra Mauro and Descartes.

06 22 35 18 CDR That's right, that's why you couldn't do it all ... without ...

06 22 35 24 LMP We already ... Lalande anyhow, the last run, right? Isn't that what the ground said?

06 22 35 29 CMP Yes.

06 22 35 30 LMP I mean, what did the ground say about the last one?

06 22 35 35 CMP ... if we can do it.

06 22 35 36 LMP I think we ought to do it. That's what ...

06 22 35 42 LMP When are we going to do the last one?

06 22 35 45 CMP ... get Lalande.

06 22 35 48 CMP ... sitting out there ... have any batteries running.

06 22 35 52 LMP I can't remember to find any of that stuff.

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- 06 22 35 54 CMP Shoot, yes; I can't find that first mark.
- 06 22 35 56 CDR Is that right?
- 06 22 36 00 CDR Well, maybe we ought to get Lalande - just get Ron and tell him to set up the attitude and the lighting ... get the chance to run the computer ...
- 06 22 36 14 LMP Got a P22.
- 06 22 36 18 CDR What were we going to do the last run --
- 06 22 36 40 CDR You got to - got to - Actually, all we need to do is get 500, do ..., get all that stuff in the bag, and we'll have everything there. If we don't, we're not going to get the film done. And we got to ...
- 06 22 37 23 CMP CP-1, I'll have it, and then the other three, and the third one, and we got it all in one PAN ... We've done 130, CP-1 - and then - all that.
- 06 22 41 28 LMP Let me ask you a question. What was the elevation at acquisition of the others?
- 06 22 41 36 CMP There you go.
- 06 22 41 38 LMP About 500 ...?
- 06 22 41 40 CMP Oh, no, no, no. It was 3 minutes prior to ...
- 06 22 44 45 CDR All right, now. Do we have enough time to try TP-2?
- 06 22 44 50 CMP Gee whiz, yes.
- 06 22 45 00 LMP That's a good idea.
- 06 22 45 04 CDR Now, if you go TP-1 and get a TP-2, and in the meantime they give us a T₁ T₂ for ... - that's that one again.
- 06 22 45 20 LMP We have 4 minutes to go until - 5 minutes or so to get back in attitude and get the camera off the ...
- 06 22 45 53 CDR Not only that, but I'm - We're not happy with not knowing where they added the first time, anyway. There's only one reason ...

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- 06 22 46 46 CDR It doesn't make any difference when we leave the Earth. You can only get to Earth in so many seconds every 24 hours. It's just like we had a 4-hour launch window for leaving Earth, ... land ... sea. ...
- 06 22 47 48 CMP Well, let me get down here and start working. Ouch!
- 06 22 48 07 CMP Where the hell's my flight plan?
- 06 22 48 20 CDR It never fails. ... magazines ... spacecraft ...
- 06 22 48 30 CDR The only pictures of the flight Al wanted were the ones of earthrise out of the LM, and I went and left the freaking thing on the lunar surface.
- 06 22 48 38 LMP The only way to avoid ... you can ...
- 06 22 49 09 CDR Tell me how this happened. I'm sitting here talking to Dick and the goddamned thing came open.
- 06 22 49 37 LMP Oh, I can't do that. ... in a goddamned hurry.
- 06 22 51 37 CDR Do we have optimum lighting on these things?
- 06 22 51 40 CMP No, I guess not.
- 06 22 52 58 CDR These sides popped clear off it?
- 06 22 53 41 CDR That freaking camera is forever - -
- 06 22 53 44 LMP Goddamned lift-off with that 16 millimeter was a great shot.
- 06 22 53 57 CMP That's right, son of a bitch.
- 06 22 54 00 CDR I don't ...
- 06 22 54 48 LMP What ... attitudes are we in, Dick?
- 06 22 54 49 CMP We're right - we ought to be right ...
- 06 22 54 55 LMP That's where we are.
- 06 22 55 10 CDR If I could get those two REVs worth and go home, ...
- 06 22 55 18 CMP We had TEI, ... at P30. That's a tough one.

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06 22 56 13 CDR How's the Earth?

06 22 56 38 CDR There it is. Hello, Earth. Man, there's not much Earth out there, I'll tell you that.

06 22 56 44 CMP Four more days and there won't be.

06 22 56 54 CMP We're behind about 3 degrees now.

06 22 57 10 CDR Do you need the flight plan, Dick?

06 22 57 13 CMP Not right at the moment; I will shortly, though.

06 22 57 16 CDR Okay.

06 22 57 31 CDR Hello, Houston; Yankee Clipper.

06 22 57 42 CDR Okay, Houston. You're breaking up.

06 22 57 49 CDR Come on! Get a good signal, let's go.

06 22 57 51 CMP Nothing we can do if we can't ... on what we got.

06 22 58 02 CDR He's looking right down the - parallel to it right now, we'll have to wait until we get out a little bit.

06 22 58 13 CDR Roger. Loud and clear. Listen, Jerry. I've got something real important for you. We were taking some target-of-opportunity photographs with the same film pack that we had the 500-millimeter film on, and, without going into details right now, I'll tell you later when we have the time - That magazine back popped off, and we're not sure we didn't wipe out that film magazine. Now, what we suggest is, is that we dump the landmark tracking, seeing as we got good ones last time on Descartes and Fra Mauro, and you pump us up another T₁ T₂ for both of them and let's get some more 500 millimeter this pass on another magazine. Okay?

06 22 59 13 CDR Okay.

06 22 59 17 LMP Must be ... that way. ..., I forgot.

06 22 59 28 CDR Huh? ...

06 23 01 46 LMP Feeling any better, Pete?

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- 06 23 01 48 CDR Huh?
- 06 23 01 49 LMP Feel any better?
- 06 23 01 51 CDR I don't think there's anything wrong other than I have a cold and I get so goddamned tired, I thought maybe I'd crawl down there and go to sleep for an hour.
- 06 23 02 03 CMP Oh, yes. Yes, you can't sleep too well; all you got was ...
- 06 23 02 48 CDR Go, Houston.
- 06 23 02 59 CMP Hooray!
- 06 23 03 00 CDR Okay. Let me tell you what happened. We - Al was very careful to watch all the time we were taking the 500-millimeter pictures to make sure that the camera was, in fact, running, and he was watching the side opposite the counter, which has got the little red-and-white wheel.
- 06 23 03 23 LMP Is that right? ...
- 06 23 03 27 CDR And, and, and - I mean he was watching the red and white to see if it was taking a picture, and we noticed that we - after we got done, all the 500-millimeter stuff that - We knew we had taken approximately 100 pictures, but the counter only read 60. And we kicked that around for quite a while, and we finally concluded that because Al had been watching, that there was something wrong with the counter and we really had taken all the pictures. So we decided that we'd use up the rest of that film on targets of opportunity. And while Al was taking the pictures out the window, the side of the magazine just popped off, right out of nowhere, for no reason, and it opened up about one-eighth of an inch and Al tried to jam it back on and he had to actually open the lock and put it back on.
- 06 23 04 21 LMP I never made it on. I had to tape it on.
- 06 23 04 23 CDR Oh. He never did make it on, so he taped it on. And we don't know whether it's light struck or not, and we don't know why it popped open. But,

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we're surely suspicious. We also don't know if it was only partially on to begin with, or that we really did lose film. So I think it's best that we take a fresh magazine which we have, and we'll get those pictures again.

- 06 23 04 58 CDR Okay. We agree. They're hustling.
- 06 23 05 04 CMP You write them down for me, I'll get this last control point.
- 06 23 05 07 CDR ... attitude, anyway.
- 06 23 05 09 LMP I don't know where they are. ... ordinarily these are - -
- 06 23 05 13 CMP We've got plenty of time.
- 06 23 05 16 CDR Let's see, now, what I need to do. We're going to copy that part. We've got him doing such a - get the lighting out of the back. ...
- 06 23 05 31 LMP Which one is this here?
- 06 23 05 32 CDR Descartes, Fra Mauro.
- 06 23 05 37 LMP f:8, 145 to - It ought to already be there.
- 06 23 05 42 CMP Yes.
- 06 23 05 45 LMP There's that little thing that comes off.
- 06 23 06 35 CDR You know that P30 PAD I used for a model, Dick? Where did it go?
- 06 23 06 40 CMP ... Did you give it to me?
- 06 23 06 46 CDR Yes. One of those loose ones.
- 06 23 06 48 CMP Oh. ...
- 06 23 07 01 CDR Yes. That's right. I was thinking about that. Because you get a one-REV-later TEI output.
- 06 23 07 07 CMP We've already used up one - TEI 45 partial. ... I think we'll all be better off ...

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- 06 23 07 28 CDR I think I might have. I think I might have bothered that one instead of the other one. They're both the same. I don't know, shit. I don't remember it, but I was handling the camera -
- 06 23 08 07 CDR Dick Gordon only tracked our side once, damn it. Got us there.
- 06 23 08 22 CDR How do you spell Intrepid? I-N-T-R-E-P-I-D?
- 06 23 08 26 LMP Yes.
- 06 23 08 39 CDR That explains why that wheel was spinning. It was - probably had pulled out just a fraction of an inch right there and he didn't know it, and I reached up and grabbed it and looked at it. I could see ... working at it.
- 06 23 09 16 CDR Go, Houston.
- 06 23 09 28 CDR Yes, sir.
- 06 23 10 09 CDR Okay. And don't forget to work up that same data for Lalande for the REV before TEI, there.
- 06 23 10 16 CMP ... need that. ... Hey, try this.
- 07 23 10 22 CDR Okay.
- 06 23 10 27 CMP I think we can all find Lalande now. ...
- 06 23 10 34 CDR Okay. Now let me ask you another question. ... film magazine.
- 06 23 10 49 CMP Not that I know of.
- 06 23 10 53 LMP I thought we had another ... - -
- 06 23 10 54 CMP ... to the attitude, Pete. ...
- 06 23 10 57 CDR Okay.
- 06 23 11 07 LMP Yes, I think when I did it - Remember when I said I didn't think it was rotating?
- 06 23 11 12 CDR Yes.
- 06 23 11 13 LMP They've got both of them right there, probably.

06 23 11 20 CDR You just didn't know it.

06 23 12 22 CMP What was that time on Herschel, Pete?

06 23 12 28 CDR Oh, time; I'm sorry.

06 23 14 31 CDR Okay, Houston.

06 23 15 01 CDR Roger. 168:09:05, 168:33:57, 168:55:10.

06 23 15 19 CDR Go.

06 23 15 59 CDR Roll, 1.1; 285.9; yaw, 1.6; roll, 1.4; 252.0; 2.0.

06 23 16 29 CDR Roger. Roll, 1.1; pitch, 285.9; yaw, 1.6 for Descartes. Fra Mauro: roll, 1.4, pitch, 252.0; yaw, 2.0.

06 23 16 50 CDR Okay. ... into a 49?

06 23 16 54 LMP Huh?

06 23 16 55 CMP ...

06 23 17 08 CDR Did we do a P52?

06 23 17 15 CDR Okay. We'll get that down to you in just a minute.

06 23 18 04 CDR ... he running?

06 23 18 40 CC Clipper, Houston. We assume then that you did not do a P52 at about 165:50. Over.

06 23 18 54 CDR No.

06 23 18 58 CMP Yes, I did.

06 23 19 00 CDR Oh, excuse me.

06 23 19 04 CMP Jerry, the torquing angles are plus zero decimal - Okay, plus 0.023, minus 0.003, plus 0.073. Torquing time 165:52:05.

06 23 19 29 CC Roger. Time 165:52:05, and the angles are plus 0.023, minus 0.003, and plus 0.073.

06 23 19 43 CMP Okay.

06 23 19 50 LMP 285.9. You going to have a tough time making it?

06 23 19 56 CDR Wait a minute, this isn't going to go.

06 23 19 58 LMP Why?

06 23 19 59 CDR You don't have a clock, there.

06 23 20 00 CMP Oh hell. ... pick up one.

06 23 20 08 LMP Plus what?

06 23 20 10 CDR 00110, plus 285 - No, no. Plus 001 - No - Plus 00160. Got it.

06 23 20 39 CMP Yo ho!

06 23 20 41 CDR Time is 167:20 --

06 23 20 43 CMP Here we come up across the --

06 23 20 46 CDR We got 6 minutes.

06 23 20 48 CMP -- our favorite spot.

06 23 20 49 CDR What's that? Herschel?

06 23 20 51 CMP No -

06 23 20 56 CDR Theophilus?

06 23 21 12 CMP Hey, Jerry, those guys on those last two P22 points, I don't see anything different from the first ones, anyway.

06 23 21 23 CC Roger, Dick. Judging from the results on all the P22s you been sending down, buddy, you're the expert.

06 23 21 30 CMP We lucked out.

06 23 21 36 LMP Anything's simple with the best crew.

06 23 21 40 CMP Huh?

06 23 21 41 CDR You're freaking it simple with the best crew.

06 23 21 45 LMP You should have told them last July.

- 06 23 21 46 CMP He's trained anyway.
- 06 23 21 48 CDR You better believe it. We should have gone on November 14th; it was a better ...
- 06 23 21 55 CMP Hey, Jerry, tell Kohrs also that on CP-2, he did pick that northern crater, and the one he's got in the - in the catalog is the centered one. But the coordinates he has is for - is for a northern one as he'll see in the film.
- 06 23 22 15 CC Roger. That's the one you marked on. Right?
- 06 23 22 17 CMP Yes, just this last one. I marked on the - the one he has in the film, but the coordinates are actually for the northern crater.

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DAY 8

07 00 08 35 CMP Why don't you wait a minute? What in the - world!
I thought you guys tracked this REV - No, no,
you're going to do the stereostrip this REV, huh?

07 00 08 55 CDR How can it do that?

07 00 09 01 CMP ...

07 00 09 06 LMP You have to think that - you're not going to do ...

07 00 09 11 CDR Yes, but we're on this REV right now.

07 00 09 14 LMP ...?

07 00 09 15 CDR Yes. 168:09, so - I don't understand what happened.

07 00 09 23 LMP ...

07 00 09 24 CDR I understand that.

07 00 09 27 SC ...

07 00 09 30 CDR But not for this REV.

07 00 09 32 SC ...

07 00 09 35 CDR Well, they just gave you these times for what?

07 00 09 39 SC ...

07 00 09 40 CDR Then, you going to have to stop in the middle.

07 00 09 42 SC ...

07 00 09 45 CDR Well, yes.

07 00 09 46 SC ... coming through ...

07 00 09 49 CDR Good luck!

07 00 09 52 SC ... I see.

07 00 10 00 LMP Then what are we missing?
We don't go all the way through.

07 00 10 03 CMP On this REV.

07 00 10 05 LMP Oh, the REV ...

07 00 10 08 CDR We're getting part of it, not all of it. They're only giving you - Oh, I see, they're only giving you 16 minutes' worth.

07 00 10 15 LMP Right.

07 00 10 16 CDR ... is something! Oh, I know - I know - I know what it is. It's REV 44 that they give you all your updates on.

07 00 10 33 SC REV 44. ...

07 00 10 35 CDR We're going around tailpipe up. We got three goddamn guys in here; one has to copy; you do that ... and I ...

07 00 10 51 CDR Who stole my pen?

07 00 10 53 LMP I'm going to bring it back.

07 00 10 57 CDR You stole mine.

07 00 11 06 CDR ... We ought to go around ...

07 00 11 12 CMP Here it is, right here. Uplink to - uplink to CSM ... I don't understand this at all. ... do a P52 on the back side, and we've done that; stereostrips here ... getting all lost; ... DSE; update to CSM; map update REV 45, TEI 45 PAD. ... looking right at them. They always ...

07 00 11 55 CDR Well, we're going to be doing Lalande right there when they're doing all that anyway. Why can't we do Lalande - Why can't we do this?

07 00 12 05 CDR ... I've got the vector right here.

07 00 12 09 SC ...

07 00 12 13 CDR There's no way you can mark on the two marks you got to mark on ... Out here, we could photo ..., I guess.

07 00 12 29 CMP I just looked at that again.

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07 00 12 31 CDR What's it supposed to be?

07 00 12 37 CDR ... marks. Fra Mauro and Descartes are on ...

07 00 12 46 SC (Sneeze)

07 00 12 47 SC Hell, that's ... already catching cold.

07 00 12 57 LMP Well, you'll have 21 days to get rid of it.
..., are they?

07 00 13 16 LMP The tape is in motion; Big Brother is listening.

07 00 13 26 CDR Big Brother is listening!

07 00 13 28 LMP ...

07 00 13 33 CDR You don't like Big Brother? (Laughter)

07 00 14 17 CDR ... how the ...

07 00 14 35 CMP Come on, SCS.

07 00 15 42 CMP Take a ... one.

07 00 15 50 LMP Got all sorts of ... - ...

07 00 15 55 CDR Well, maybe it's because I've led 8 sleep - had
8 days without sleep and I was so miserable ...

07 00 17 32 LMP I hope ...

07 00 17 34 CDR Hope not but ...

07 00 19 01 CDR I think they had a party last night.

07 00 19 13 LMP Celebrate.

07 00 20 05 CDR That's right. Wait until the flight planners get
a hold of him on his own flight.

07 00 20 15 LMP Well - well, I don't give a shit ... every morning
... and at 1 o'clock in the afternoon.

07 00 20 29 CDR Well, that's the way it's supposed to be!

07 00 20 33 LMP ... star gazing.

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07 00 20 49 CDR Hot dog! And ... (laughter).

07 00 21 59 CDR That way everybody can have ... Not a hell of a lot to do normally ... that had a lot to ...

07 00 22 32 LMP ... what we always said, remember these blasted bags.

07 00 22 36 CDR There never was but just the three of us ... the hell of it ...

07 00 22 44 MS (Laughter)

07 00 23 32 CDR Those - those batteries! Those batteries ...

07 00 23 52 CDR It's like - you know - Well, I thought what was going to happen for a minute there. ..., you know, I got the strange feeling that we were going to wind up in orbit with a spacecraft that had no electrical power.

07 00 24 07 CMP Yes, that's crossed my mind, too.

07 00 24 10 CDR ... end up there just fooling around.

07 00 24 13 CMP ... how awful lonely it would be ...

07 00 24 19 LMP ... I wasn't too fond of that idea. That's a hell of a way to go, isn't it? ... no electrical power whatsoever ...

07 00 24 58 CDR ... if you happen to be ...

07 00 25 34 CDR (Singing, laughter)

07 00 25 53 CDR You know, I can't stay up any longer ... stayed up. I haven't slept but 2 hours every day since we've been up here.

07 00 26 01 CMP Yes, ... 8 hours ...

07 00 26 04 LMP That's what I've been saying every night. ... close both eyes ...

07 00 26 32 CMP Later on - yes - we can hook it up through here.

07 00 26 35 LMP Listen, I'd wake up, and I'd look at the time, and say, "What time are we supposed to get up?" ... lay there and look up ...

07 00 27 12 CMP Haven't had any trouble sleeping on this schedule.

07 00 27 42 CDR Tonight we get 8 hours' sleep. ... wakes up ...

07 00 28 21 LMP Hey, what time do we got to get ... - daylight?

07 00 29 12 CMP What?

07 00 29 13 CDR This ... is over it (laughter).

07 00 29 16 CMP Yes, sirree; it's - -

07 00 29 17 CDR Right. ... to an early ending.

07 00 29 27 CDR (Laughter)

07 00 29 29 LMP Is it the same one? Don't throw it away; save it.

07 00 30 02 CDR Hey, it won't take your ..., Dick. There you go.

07 00 30 50 CDR ... for the day, huh?

07 00 30 51 LMP ... spacecraft, yes. I don't care ...

07 00 31 01 CMP Want that ... up? Okay.

07 00 32 27 CMP Watch those!

07 00 32 36 CMP You're going to end up with all the grubby stuff last.

07 00 32 49 LMP What are you going to do with all that?

07 00 32 51 CDR No, all those goddamned bags are locked away in there ... Normally, you could wrap your garbage in the over ... and you don't have that mess. Those things are ...

07 00 33 03 CMP Yes.

07 00 33 04 CDR Oh, I see what you mean. You put the old ... down there; that's what you did.

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07 00 33 08 CMP That's right. You don't have that large cockpit any more.

07 00 33 33 CDR (Laughter) Bunch of when you get home, I'd like to use that.

07 00 33 39 MS (Laughter)

07 00 33 43 CMP He wants to take his map ...

07 00 34 04 CDR ... that SPS burn.

07 00 34 08 LMP How long is that, a 4-minute burn?

07 00 34 10 CDR Three minutes and 38 seconds - something like that.

07 00 34 13 LMP Good grief! That's going to be a - ...

07 00 34 18 CDR Can't burn a hell of a lot longer than that anyhow. It's only got 29 percent worth of fuel in that bastard.

07 00 34 25 CMP ... that baby ready to burn.

07 00 34 46 CDR Man. Somebody blew it.

07 00 34 50 LMP Blew what?

07 00 34 51 CDR That last jettison. I just can't believe that they'd - try to do something ... There must be a better way.

07 00 35 03 CDR Must be ...

07 00 35 35 CDR That's one thing we've had with us for 59 ...

07 00 35 58 LMP That's going to be a long 21 days, gang.

07 00 36 32 LMP Want to get your ..., up there?

07 00 36 33 CDR I can get mine over here.

07 00 36 36 LMP ... again?

07 00 36 37 CDR Yes. Get that stuff out of the way there. I don't think we ought to leave that urine thing in VENT, though.

07 00 36 45 LMP Is that in VENT?

07 00 36 47 CDR ... but it's just - ... tighten up our ...

07 00 36 54 CDR ...?

07 00 36 56 CDR Yes. ... No, ... filter's just plum full of urine ...

07 00 37 04 CMP Oh, yes; well, that's what it's there for.

07 00 37 18 CDR Anybody know where we are? Where we are to Earth -

07 00 37 24 CMP Other than that, we're kind of helpless (laughter).

07 00 37 46 MS ...

07 00 37 49 CDR -- that garbage ... and we won't be able to get through the hatch.

07 00 38 03 CMP No. There's plenty of work ... get back.

07 00 38 11 LMP I don't care. ... I really wouldn't, but I don't care. Not going to have me for a ...

07 00 38 22 CDR I've got - I'll tell you, once I had a grand master ... all responsibility ... go down to the Cape and ... (laughter).

07 00 38 32 CDR You can say that again.

07 00 38 36 LMP You spent the whole damn summer down there, didn't you?

07 00 38 38 CDR Yes, I did; damn right, I did.

07 00 38 42 CMP Supposed to be up in a week.

07 00 38 45 CDR Yes. ... (laughter).

07 00 39 27 CDR PAO is down there with "Well, the boys are in good humor up there" (laughter). Oh, PAO, you look at this DSE tape, you're going to kill me. How are you doing down there in the world of advertising?

07 00 40 14 CDR You know, that orange drink is really good!

07 00 40 19 LMP Yes, it is.

07 00 40 21 CMP ...

07 00 40 22 CDR Sure it is. What do you have, orange drink?

07 00 40 34 CMP ...

07 00 40 41 CDR All those others been working ..., Dick.

07 00 41 21 CDR Man, I'm still thinking about -

07 00 41 27 LMP What?

07 00 41 28 CDR Jumping out of that damn spacecraft down there and - I'm standing over there looking around ... supposed to the Surveyor (laughter).

07 00 41 43 LMP Do you realize ... we got out?

07 00 41 46 CDR Do I? I could have - I was - ... go by the crater, and I thought I'd landed - next to the ... crater ... We were still talking about it, see; and - and - and, well, we were still talking about it.

07 00 42 11 LMP We - we still talking about it, Pete; and I said, "Now ..."

07 00 42 25 CDR The next thing we did ... and I was so - I thought I'd gone to that ... and all of a sudden ... there was this big goddamn crater and ... So, then, I finally, I flew it around the left side of the spacecraft ...

07 00 43 28 CDR We would have ... that Surveyor ...

07 00 44 25 CDR Well, that's just exactly where it was flying. Sure, if I was going somewhere. I thought I was going somewhere. ... I flew that big ... so much I ... I ... to the right and then I thought we were long ... Then, I felt, well, I'm wrong; I'm going to wind up short ... I'm going to look at the parking lot, and I didn't like it ... 30 seconds ... one step forward and then - and then we flew - we flew right up - The Surveyor crater was like, right here; and we flew right up to the parking lot; we were still about 6 or 700 feet. At that point, I took it manually; we were going like hell. At that point, I took it manually, and I held 30 degrees right over here ... And what I did was, as I flew

it around like this, flew it around here, and then rolled it back out and got her going this way again, then that ... would turn to the left - ...

07 00 47 10 CDR I'll tell you, that big bastard got ... we were absolutely level when we shut it off. When I got ... the right time ... and shut the engine off, the big bell was level with - the ground's like this, and the plus-Y gear. Yes. So I rocked it over and stopped.

07 00 47 42 CDR The probe - the probe was in ... right under the gear ... those drag marks, where they hold - ...

07 00 48 15 CDR Looked gray and looked like all the boulders were white - gray - going all over. I did when I was ...

07 00 48 30 CDR Gosh, I just thought it was like the area of the ... and I just knew that that was good.

07 00 49 55 CMP Maybe we're in the wrong place.

07 00 51 16 LMP Hey, Dick?

07 00 51 17 CMP Yes.

07 00 51 18 LMP ... Huh?

07 00 51 25 CMP Sure do.

07 00 51 30 LMP Stereostrip. We have ORB RATE -

07 00 51 36 CMP Sure do.

07 00 51 46 CDR 5 $\frac{1}{4}$, Al's going to ...

07 00 52 30 CMP Starting at 168:52 - ...

07 00 52 58 CDR 15 $\frac{1}{4}$, 00 ...

07 00 53 10 CDR Plus ... Go. Now, you want VERB 79 ...?

07 00 53 54 CDR 5, 4, 3, 2, 1 -

07 00 53 59 CDR MARK.

07 00 54 18 CMP Only one problem; you're rolling.

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07 00 55 56 CMP MARK.

TIME SKIP

07 01 26 05 CDR Will the music bother you, Dick?
07 01 26 07 CMP No.
07 01 26 13 CDR The logic isn't ..., is it?
07 01 26 15 CMP Yes.
07 01 26 33 CMP What the hell's going on?

TIME SKIP

07 01 31 16 LMP You turn?
07 01 32 02 LMP What was that? On.
07 01 32 11 CMP Program PGNCS light.
07 01 32 13 CDR Okay.
07 01 33 38 CMP Here's those picture films. ...
07 01 33 43 CDR ...
07 01 39 19 CMP What now, coach?
07 01 39 25 CDR How's the marks?
07 01 39 28 CMP On target.
07 01 39 32 LMP Pete?
07 01 39 33 CMP On target.
07 01 39 34 LMP Is it?
07 01 39 37 CDR Okay, I guess we -
07 01 39 40 LMP Sure. ... - -
07 01 39 41 CMP We've got desired REFSMMAT, don't we?
07 01 39 45 CDR You're the guy with -
07 01 39 49 CMP No ... I got ...

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07 01 41 42 LMP ... You get the magazine ... altitude.

TIME SKIP

07 02 08 32 LMP ... hole ...?

07 02 08 39 CDR Sorry. Say again.

07 02 08 40 CMP Remember the ... thing.

07 02 08 44 CDR Yes. Every - just a second.

07 02 08 52 LMP ...

07 02 08 57 CMP ... Cape Kennedy ... Cape Kennedy ...

07 02 09 14 CDR ... 8, 112 for Kennedy. ...

07 02 09 17 CMP ...

07 02 09 19 CDR We can ... half ~~as~~ MAG. Eight minutes and ... in orbit. ... if you had to.

07 02 09 50 CDR Check the switches.

07 02 10 34 CDR We don't need to dump, do we?

07 02 10 40 LMP ... burn. ...

07 02 10 43 CMP ...

07 02 11 24 CDR ...

07 02 11 32 LMP Did you see ...?

07 02 11 37 CDR Yes, I'm not surprised at anything around the Moon ...

07 02 12 08 LMP In what way?

07 02 12 10 CDR ... could break your - leg.

07 02 12 29 CDR Okay. Now give me the ...

07 02 13 11 CMP Where, where, where?

07 02 13 13 CDR What?

07 02 13 17 LMP ...

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07 02 13 29 LMP ... I thought it was over there ...
07 02 13 32 CDR I didn't notice; but, when I saw it, it was about
the second or third compartment on the left.
07 02 13 40 CDR ... I don't know where it is.
07 02 13 49 LMP Right over there. ...
07 02 14 32 CDR Hide every goddamn thing around here.
07 02 14 45 CDR What's the matter?
07 02 15 02 CDR What?
07 02 15 09 CMP Got my ...?
07 02 15 10 CDR Yes.
07 02 15 11 CMP ...
07 02 15 20 CDR Oh boy, I just ...
07 02 15 40 CMP I don't want to go to sleep.
07 02 15 43 LMP You better.
07 02 15 45 CMP Why the hell would I need to get my sleep in?
07 02 16 24 CDR Man, I couldn't keep my eyes open when I got back.
07 02 16 53 CDR What?
07 02 17 20 CMP You guys ready for the ...?
07 02 19 53 CDR What kind of good thing can happen to the SPS
engine ...? It could - It purges the shit out of
us and the ... nearly knock you over?
07 02 20 14 CDR Huh?
07 02 20 21 CDR We've gone over that.
07 02 20 24 CDR Yes. ... Haven't gone over it yet. ... that -
that I remember. Same ... but I have to stop and
think what the freak it was here that was right,
and it's not right ...
07 02 21 55 CDR Where's the PAD? ... You have to check on them
in 1 minute, you guys.

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- 07 02 22 12 CDR ... TEI PAD?
- 07 02 22 55 CDR Two hours and 5 minutes.
- 07 02 25 14 CDR It'll take a lot longer to set ...
- 07 02 26 04 CDR Hey, Al, what happened to the light ...? ... Huh?
- 07 02 27 57 CDR Dick, check me and Al Bean ...
- 07 02 28 27 CDR (Laughter) ... cards ...
- 07 02 29 31 CDR Yes, we would be if we could just luck out. I did ...
- 07 02 30 07 CDR I got my ... ready and they're not over 90. ...
It's very rare if one will be ...
- 07 02 30 50 CDR I didn't - I didn't think pictures of this side
would show anyway.
- 07 02 32 06 LMP What? Don't I what?
- 07 02 32 23 CDR I'd have really slept down there a hell of a lot
better than I did - As a matter of fact, when you
woke me up - Yes, well - No matter how tired I
am, if I sleep a little bit, when something wakes
me up, and I ... have a hell of a time going back
to sleep. I sleep for 10 hours. Something happened
in the spacecraft about three times in a row. That's
the main thing. If I go to sleep and I'm real tired,
and something wakes me up two or three times ...
I'm awake. That glycol pump used to change frequency.
It really changed frequency once right after I went
to sleep. And, man, I woke up with a shock. ...
and then a couple of times when ... and I slept a
good 4-1/2 hours.
- 07 02 33 26 CDR But I'd have slept a lot better if - it's the ...
that ...
- 07 02 33 39 CDR I don't think I could have run that mile in that
suit ...
- 07 02 33 54 CDR Well, I see the work paid off though, didn't it?
Man.
- 07 02 34 12 CDR What we should have done was allowed ourselves more
time to ...
- 07 02 35 17 CDR We got COMM with nobody.

07 02 35 19 CMP I heard that part.

07 02 36 25 CDR What?

07 02 36 28 CDR Call the what?

07 02 36 39 LMP Going to need that ...

07 02 37 32 CMP Come on, Pete. Old Doctor Conrad and Doctor Gordon will look over your ... (Laughter) ...

07 02 37 49 CDR Probably the ... on the LCGs.

07 02 38 55 CDR That's just - just full of space rubble.

07 02 39 27 CDR There's Al thinking again, another way to save money.

07 02 41 06 CDR ... there. We don't have nothing ...

07 02 41 08 LMP Yes, we do. ...

07 02 41 19 CDR We're going to need another PAD, Al. You got to - We're going to need two more PADs.

07 02 41 26 CDR Sure. Going to give us that TEI REV 46 PAD ...

07 02 44 20 CDR (Laughter)

07 02 44 55 CDR Sure it wasn't a ... us. God damn (laughter).

07 02 45 29 CDR I don't know, ... he was on a big hill and ... the rock box and all that

07 02 45 56 SC (Singing) I'm getting married in the morning.

07 02 46 38 CDR ... right. No. You quit there after about ...

07 02 47 14 CMP Where's the - What's the score card?

07 02 47 19 CDR ... 172 to 27.

07 02 47 32 CDR ... lost two for you ... a shame ...

07 02 50 02 CMP ... don't forget ullage.

07 02 50 07 CDR The gun. Who has the damned gun? Hey, look at down there.

07 02 50 32 CMP Beats the hell out of me. ... not going to be in sunlight.

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07 02 50 39 CDR Yes.

07 02 52 12 CMP Boy, I'm going ... about 60 miles above that desert.

07 02 53 04 LMP And it's always amazing ... deal.

07 02 53 27 CMP See you all picked out the ... on the one from the Earth. It's about ... here.

07 02 53 43 LMP I don't think the platform would help ...

07 02 54 01 LMP ... How many photographs do you think we need?

07 02 54 10 LMP We got three of them in here. How's that?

07 02 54 13 LMP One, two, three. If you want, I'll make some more.

07 02 54 23 CDR Why don't we got ... now?

07 02 54 40 CMP You going to put the TV internal tonight after we show the Moon?

07 02 54 47 CDR I don't know. What will we do, though? We ought to think of something.

07 02 54 54 CMP Why don't we ...? ... freaking tired ...

07 02 55 02 CDR (Laughter) And there's where we hit the Moon.

07 02 55 08 LMP That's 3 long, hard days, too. Today's been one of them, too. Worked my ass off in this goddamned - LEB today.

07 02 55 25 CMP Well, I -

07 02 55 26 CDR Okay, let's say that we bring her - Let's say that we bring the TV camera in; what'll we show them?

07 02 55 34 CDR (Laughter)

07 02 56 11 CMP They'll still find those ...

07 02 56 15 CDR See where those craters are right there, Dick? The taller ones?

07 02 56 19 CMP Yes.

07 02 56 20 CDR That's just exactly what it looks like on the lunar ... then all of a sudden ... and then a cold, dark black shadow ...

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07 02 56 38 CMP ...

07 02 56 45 LMP What ... after doing that, what Sun angles would - If you have your choice of Sun angles, what would you take next time?

07 02 56 56 LMP Why?

07 02 56 58 CDR ... zero phase ... either. We'd be walking along ...

07 02 57 13 LMP ... because the Sun was so low. Didn't that zero phase blind you?

07 02 57 23 CDR That could have been - that could have been where it was ... all that shit ...

07 02 57 31 LMP No, it wasn't supposed to be -

07 02 57 34 CMP Wasn't supposed to bother you anyway, was it?

07 02 57 37 CDR Supposed to have on ... yes, except ...

07 02 58 03 LMP ... as far away from here as ...

07 02 58 17 CMP Hello, Houston; Clipper here.

07 02 58 21 CDR Hello there. How are you today?

07 02 58 28 CMP Oh, not too bad; but I think we're about ready to leave. We haven't met anybody up here.

07 02 58 38 CMP We haven't found any strangers.

TIME SKIP

07 04 04 30 LMP ... are all up.

07 04 05 16 LMP What's today? Thursday?

07 04 05 20 CMP ... your flight plan.

07 04 05 31 CDR Roger-Roger. By-by. See you on the other side.

07 04 05 41 CMP ... one ...

07 04 05 44 CDR No, no, no. No that - Well - No, I got to fold out one page length. No.

- 07 04 06 02 CDR Right at the very first of these plans, they had taken it out. They got some alternate contingency ones there.
- 07 04 06 33 LMP We splash down on Monday morning - No, we splash down Monday afternoon at 1500. So, today must be Monday - Sunday. There we go. ... Tuesday. Yes. ... That's about right. ...
- 07 04 07 16 LMP ... 4 o'clock, Friday. ...
- 07 04 07 19 CDR I think that ought to be ...
- 07 04 07 31 LMP Three days to go.
- 07 04 07 37 CDR How many to go?
- 07 04 08 02 LMP ... shutdown on this ...
- 07 04 08 28 LMP Now, let's get that ECS before you ... Okay?
- 07 04 08 30 CDR ..., right?
- 07 04 08 33 LMP Right.
- 07 04 09 06 CMP You know, everything sticks to that ...
- 07 04 09 09 CDR I know it does.
- 07 04 09 12 LMP ...
- 07 04 09 16 CDR Boy, these guys get anxious over that ... 2-second ... cycle.
- 07 04 09 24 LMP Kind of fun ...
- 07 04 09 45 CDR Were you really there? We been in this thing 7 days.
- 07 04 09 51 LMP You agree with that? You want to go around one more time and take another look?
- 07 04 09 56 CMP I'll go if you'll go.
- 07 04 09 58 LMP ...
- 07 04 10 00 CDR Would you mind if I vetoed that? (Laughter)
- 07 04 10 08 CMP Trim is minus 64 -
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07 04 10 15 LMP ... - what we need floating by here, one of Al Bean's ...

07 04 10 21 CMP ...?

07 04 10 23 LMP Yes.

07 04 10 29 CDR (Laughter) Yes, we did a - all that jazz. That's something I don't need right now, unless you want it.

07 04 10 48 LMP ... that one.

07 04 10 49 CDR I'll put it away. Where's the data file box?

07 04 10 56 CMP All those numbers are right there ...

07 04 11 00 CDR I need the ΔT_{ig} which is ...; burn time - $V_{GX,Y,Z}$; ΔV_C , fuel, OX.

07 04 11 09 CMP Okay.

07 04 11 12 CDR Don't say zero --

07 04 11 13 CMP ...

07 04 11 17 CDR So, we get the 0.2 (laughter).

07 04 11 20 CMP I feel we got plenty of ... we can put ...

07 04 11 31 CDR No, I imagine you'll have 4 or 5 percent with a fair amount of propellant poop.

07 04 12 14 CDR ... look at that (laughter). ...

07 04 12 20 LMP ... those guys ... really pass ... --

07 04 12 25 CDR Yes. Yes --

07 04 12 26 LMP ...

07 04 12 30 CDR You just - you want to go do the job and get on the ground --

07 04 12 32 LMP ... makes things real interesting.

07 04 12 34 CMP That's all. Yes.

07 04 12 35 LMP What?

07 04 12 36 CMP You can't do anything more than that.

07 04 12 37 LMP ... screw it around and around for 10 days?

07 04 12 40 CDR Well, they - they - -

07 04 12 42 CMP No, no, ... 5 days in space.

07 04 12 44 LMP Sure.

07 04 12 45 CMP It's exciting, but after that 1 day's enough and then you come home. If you have anything to do. Really got to fly more ... than you think it is.

07 04 12 59 LMP No, it really is - -

07 04 13 00 CMP ... really is - -

07 04 13 01 LMP Flying is better than I ever imagined it. I never could imagine ..., you know, the way this thing moves around when you look out the window. In the simulator ... you see you hovering up there in that sunlight; you still can't move. You ... keep coming in there ...

07 04 13 23 CMP Real weird.

07 04 13 32 CDR What is weird is sitting down there on the lunar surface and watching him go whistling overhead. Whoosh!

07 04 13 34 CMP ...?

07 04 13 41 CDR Oh, sure.

07 04 13 42 CMP Huh?

07 04 13 43 CDR Sure.

07 04 13 44 CMP Moving out?

07 04 13 45 LMP Yes.

07 04 13 46 CDR Oh, yes!

- 07 04 13 47 IMP ... moving along like an Earth satellite ... like that.
- 07 04 13 49 CDR You weren't as bright as I thought you'd be.
- 07 04 13 51 CMP Is that right?
- 07 04 13 52 CDR Now, I kind of suspect that we would get some attenuation of the - of the size in the atmosphere when you see a satellite go by. You weren't as bright. You're - you were bright, but you were very small. You were just like a star.
- 07 04 14 07 CMP I am very small.
- 07 04 14 08 CDR Very small, but there's no doubt who it was, you know.
- 07 04 14 13 CMP I understand now why all those particles were going out in front of me. You know, I said every time I looked out the AOT to the front or the sides - all the time these little particles - whoosh - Man, they looked like they were going --
- 07 04 14 24 IMP Just ridiculous.
- 07 04 14 25 CMP Yes, some of them looked like they didn't even have a trajectory. They just ... - away as far as I could see. Whenever we jet - -
- 07 04 14 32 IMP ... that spot ... - -
- 07 04 14 33 CMP -- whenever we jettison the LM and you talked about that thing coming out the back; that's the deflector, that water boiler. Well, those little particles of water go zingggg, and shoot out that way, see? That's what I was seeing. I knew that was what it was, but I couldn't understand why it would come around the front.
- 07 04 14 48 CDR Nonpropulsive venting.
- 07 04 14 51 IMP ... half of them out the back.
- 07 04 14 56 CMP I tell you another thing I think is fascinating. You're up here without any motor, you see yourself going like hell - I can't get used to that. You

can go backwards and sideways - Even going like hell, you are waiting for the engine sound or something.

07 04 15 12 CDR Well, I get the biggest charge out of it, like in the LM ... when you're maneuvering with RCS, you know, ... over sideways, and you go whoosh! ... (Laughter) It is neat.

07 04 15 25 LMP Jesus Christ, you're not even locked in this damn thing.

07 04 15 31 CDR (Yawn)

07 04 15 34 LMP Now, we are.

07 04 15 38 CDR The best thing they said to me the whole trip was I could take that BIOMED harness off. Man, I was really itching.

07 04 15 55 LMP Twelve minutes.

07 04 15 56 CMP Twelve and a half; 12:20.

07 04 16 03 CDR Six minutes until we get that damn descent time. Did you get that data on ...?

07 04 16 08 CMP ... sounds like I'm ... up.

07 04 16 11 CDR -- ... BAT charge ... (Laughter) ... He's going to be going ah, ah, ah, ah. ... power on the buses and - (Laughter)

07 04 16 22 LMP ... Like the DT squirms (laughter).

07 04 16 24 CMP ... back to Earth, that's what I'd say (laughter).

07 04 16 32 LMP You got power on your buses, and you've got to be able to do it ... (laughter).

07 04 16 35 CMP Okay. I - I hadn't even realized how ...

07 04 17 17 CDR All the dust that's clung to something - will now get unclung.

07 04 17 23 CMP Hey, you're right. We better clean off the screen down there.

07 04 17 53 CMP ... 2000 feet won't give you the velocity to get away the Moon and back to Earth orbit ...

07 04 17 58 CDR No - -

07 04 17 59 LMP That's right.

07 04 18 00 CMP What?

07 04 18 01 LMP Sure doesn't, does it?

07 04 18 03 CMP ... 36 000?

07 04 18 05 CDR Well, we needed 10 - -

07 04 18 06 LMP No, we need more than that.

07 04 18 07 CDR Oh, we're only about 5; so, we need 8 to get back from here.

07 04 18 12 LMP I think the ... should read - -

07 04 18 25 LMP I won't be able to sleep tonight with my harness laying down by my side.

07 04 18 29 CMP You'll say, "Why have you got that string holding your arm up in the air?"

07 04 18 34 LMP Because I like it that way - I like it that way - -

07 04 18 39 CDR ... his face is - You can always tell somebody ... face by the way he sleeps with his arms in the air. God, I use - I used to - never use to run into the other guy all the time like this; I was so used to - -

07 04 18 50 LMP Yes, that's true. Comfortable - -

07 04 18 51 CDR When I'd wake up in the middle of the night, when we were sleeping together, the sight was the ugliest I ever - ...

07 04 19 01 LMP You like that? Hey, Richard, I'll tell you what - why don't you give it a GDC ALIGN?

07 04 19 09 CMP Get the pusha-button, huh? Okay.

07 04 19 11 LMP Pusha da pusha-button.

07 04 19 22 CDR Ten degrees an hour which would look like the god-damned thing was going in circles. Is that what it is? Ten degrees?

07 04 19 37 CDR GDC ALIGN.

07 04 19 38 CMP You know after that rendezvous, I flipped that AGS to GDC ALIGN ... balls, one off. 200 degrees. ...

07 04 19 52 IMP Find a guy that can operate that ... (laughter).

07 04 19 56 CDR (Laughter) ... be a fast man on the button.

07 04 19 59 CMP Come on, you guys, ...

07 04 20 02 CDR It was so funny; but, after CSI, I couldn't get a word out of him. He just goes ... got him all pissed off.

07 04 20 13 IMP ...

07 04 20 15 CDR I knew I had done it because he was as funny as hell.

07 04 20 18 CMP Main bus ties look good.

07 04 20 19 CDR Okay.

07 04 20 20 IMP ...

07 04 20 22 CMP ...

07 04 20 24 CDR TVC SERVO POWER, AC 1/MAIN A.

07 04 20 27 CMP AC 1/MAIN A.

07 04 20 28 CDR TVC SERVO POWER 2, AC 2 - -

07 04 20 30 CMP AC 2/MAIN B.

07 04 20 31 CDR ROT CONTROL POWER NORMAL, two, to AC.

07 04 20 35 CMP Two to AC.

07 04 20 36 CDR ROT CONTROL POWER DIRECT, two, OFF.

07 04 20 37 CMP DIRECT, two, OFF.

07 04 20 38 CDR BMAG MODE, three of them, ATT 1/RATE 2.

07 04 20 40 CMP ATT 1/RATE 2.

07 04 20 42 CDR SPACECRAFT CONTROL to SCS.

07 04 20 44 CMP SCS.

07 04 20 45 CDR Arm ROTATION HAND CONTROLLER number 2.

07 04 20 47 CMP Two's armed.

07 04 20 49 CDR Okay. GIMBAL MOTORS number 1.

07 04 20 50 CMP Number 1 -

07 04 20 51 CMP Mark.

07 04 20 53 LMP On.

07 04 20 54 CMP One -

07 04 20 55 CMP Mark.

07 04 20 56 LMP On.

07 04 20 57 CDR Okay. Verify trim control and set. Minus 64, if I remember right, plus 29.

07 04 21 05 LMP Did you look it up?

07 04 21 07 CDR Plus 24 - -

07 04 21 08 CMP I got it right here - -

07 04 21 09 CDR He's got it written down. Don't worry about it.

07 04 21 10 CMP Okay.

07 04 21 11 LMP Okay. Thank you.

07 04 21 12 CDR Okay, MTVC.

07 04 21 16 LMP No, ... I'm sorry. I got to have ... checklist.

07 04 21 23 CMP Okay.

07 04 21 24 CDR Now, SPACECRAFT CONTROL to CMC.

07 04 21 27 CMP CMC.

07 04 21 28 CDR TRANSLATIONAL HAND CONTROLLER, clockwise.

07 04 21 31 LMP Don't make any ... with me.

07 04 21 32 CMP Clockwise.

07 04 21 33 CDR Verify no MTVC.

07 04 21 34 CMP No MTVC.

07 04 21 35 CDR GIMBAL MOTORS 2, ON.

07 04 21 37 CMP 2 -

07 04 21 38 CMP Mark.

07 04 21 39 LMP Got it.

07 04 21 40 CMP 2 YAW -

07 04 21 41 CMP Mark.

07 04 21 42 LMP On.

07 04 21 43 CDR Set GPI to trim.

07 04 21 47 CMP Done.

07 04 21 48 CDR Verify MTVC.

07 04 21 50 CMP MTVC. Okay.

07 04 21 53 CDR TRANSLATIONAL HAND CONTROLLER, NEUTRAL.

07 04 21 55 CMP NEUTRAL.

07 04 21 56 CDR No MTVC.

07 04 21 58 CMP Yes. No MTVC.

07 04 22 00 CDR Okay. ROT CONTROL POWER, two, AC/DC.

07 04 22 03 CMP AC/DC.

07 04 22 05 CDR ROT CONTROL POWER DIRECT, MAIN A/MAIN B.

07 04 22 07 CMP MAIN A/MAIN B.

07 04 22 08 CDR BMAG MODES to RATE 2.

07 04 22 09 CMP RATE 2.

07 04 22 10 CDR Okay. PRO. Okay. BMAG MODE, three, ATT 1/RATE 2.

07 04 22 22 CMP ATT 1/RATE 2.

07 04 22 24 CDR ENTER. 204, ... AUTO ...

07 04 22 27 CMP Plus 2, minus 2, zero; 2, minus 2, zero.

07 04 22 46 CDR One minute and 30 seconds. FDAI SCALE, 5/5.

07 04 22 50 CMP SCALE, 5/5.

07 04 22 52 CDR LIMIT CYCLE, OFF.

07 04 22 53 CMP LIMIT CYCLE's OFF.

07 04 22 54 CDR RATE, HIGH.

07 04 22 55 CMP RATE's HIGH.

07 04 22 56 CDR Update the DET.

07 04 22 57 LMP It's right on.

07 04 22 59 CDR Looks like it's right on. Yes. Okay. I'm standing by for SPS - -

07 04 23 06 LMP ...

07 04 23 07 CDR Yes, I understand. Standing by for SPS He VALVES.

07 04 23 10 LMP HELIUM VALVES, AUTO ... - -

07 04 23 11 CDR Two of them.

07 04 23 13 LMP ...

07 04 23 18 CDR I've got a ... for you going here. Don't jump the gun.

07 04 23 23 CMP That's right. Take it easy. All in good time.

07 04 24 23 LMP ... see here, I'm going to - -
07 04 24 28 CDR ... You're almost jumpy.
07 04 24 38 LMP Got a ... like a sporty car.
07 04 25 15 CDR Two minutes. DELTA-V A, NORMAL.
07 04 25 17 CMP DELTA-V A, NORMAL.
07 04 25 19 CDR TRANSLATIONAL HAND CONTROLLER, armed.
07 04 25 21 CMP Armed.
07 04 25 22 CDR Arm both ROTATIONAL HAND CON - -
07 04 25 24 CMP ROTATIONAL's armed.
07 04 25 25 CDR SPS HELIUM VALVES, two of them, AUTO.
07 04 25 27 LMP They are AUTO.
07 04 25 28 CDR TAPE RECORDER, HIGH BIT RATE, RECORD, FORWARD,
COMMAND RESET - -
07 04 26 18 CDR One minute.
07 04 26 33 LMP Go ahead.
07 04 26 41 CDR DSKY's blank. ... Average g.
07 04 26 49 LMP ... normal.
07 04 26 51 CMP Stand by for ullage.
07 04 26 54 CDR Ullage. ... 15, 14, 13, 12, ullage - -
07 04 27 08 LMP We have ullage.
07 04 27 09 CDR - - 9, 8, 7, 6, 5, 4, proceed - -
07 04 27 15 LMP ...
07 04 27 16 CDR Okay.
07 04 27 17 CMP Thrust ON.
07 04 27 18 CDR Thrust ON. ... ball valve.

07 04 27 25 CMP 100 percent ... 100 psi ... I'm on a deadband in roll.

07 04 27 32 CDR ... all right.

07 04 27 34 CMP ... clock in there. It's all right. ...

07 04 27 47 CMP Not a bad --

07 04 27 48 CDR Looks like we're going to get an - exactly an on-time shutdown.

07 04 27 51 CMP Looks like about - a little over one-half g is all, Al.

07 04 27 55 LMP ...

07 04 27 58 CMP I'm going to ... everything ...

07 04 28 01 CDR Yes.

07 04 28 02 CMP ... good; chamber pressure's solid as a rock.

07 04 28 13 CDR ... (Laughter) Okay, 1 minute --

07 04 28 16 CMP 100 percent --

07 04 28 17 CDR -- Looks like it's going to get shutdown right at 2:10. I think I got a pretty good handle on that.

07 04 28 25 CMP Cabin pressure's steady.

07 04 28 26 CDR Good.

07 04 28 27 CMP Sitting right at zero.

07 04 28 28 CDR One minute to burn. Looks like it may burn a little bit long, now. About 1 second, maybe.

07 04 28 33 CMP Okay.

07 04 28 36 LMP How many g's you got, babe?

07 04 28 37 CMP ... About three-quarters --

07 04 28 38 CDR About two-thirds - three-quarters.

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07 04 28 45 LMP ...
07 04 28 48 CDR One minute and 30 seconds. Forty seconds to burn.
07 04 28 50 LMP Ooh.
07 04 28 51 CDR Looks like it's going to shut down 2 seconds late.
07 04 28 55 CMP ... use the DELTA-V anyway.
07 04 28 57 CDR ... be high.
07 04 29 00 LMP Twenty-two seconds to burn.
07 04 29 05 CMP That roll's just ... back and forth now.
07 04 29 08 LMP ...
07 04 29 10 CDR Roll.
07 04 29 11 LMP Roll.
07 04 29 16 CDR Okay. Two minutes.
07 04 29 18 LMP We're 1 second over.
07 04 29 19 CDR 3, 4, 5. Yes, about 1 second over.
07 04 29 23 LMP One second over.
07 04 29 27 CDR SHUTDOWN. DELTA-V's OFF.
07 04 29 31 LMP GIMBAL MOTORS, OFF.
07 04 29 34 CDR Go.
07 04 29 35 LMP 1, 1.
07 04 29 37 CMP Okay.
07 04 29 38 LMP 2, 2.
07 04 29 39 CDR ... put it back in the ...
07 04 29 46 CMP Let me get it back to ... TVC SERVO POWER.
07 04 29 52 CMP/CDR ... GIMBAL MOTORS, OFF.

07 04 29 54 LMP They're OFF. Didn't come off?

07 04 30 00 CMP Okay. No need to trim. We got - zero, plus 7, plus 1.

07 04 30 07 LMP Plus 0, 7, 1.

07 04 30 09 CMP Zero - -

07 04 30 10 CDR Zero, 7, 1. ... minus 14.4, minus 14.4, plus ... Burn time was what? 2:11?

07 04 30 24 CMP 2:11.

07 04 30 26 CDR 2:11. Burn on time. Okay. What's your fuel remaining? Now - -

07 04 30 32 LMP Fuel remaining is 7 plus 4, ... 7 plus 7 ...

07 04 30 40 CDR Jumping all around. They're all over the place.

07 04 30 51 CDR All right. VERB 66. ...

07 04 30 55 LMP ...?

07 04 30 56 CDR Yes. The buses look normal.

07 04 31 03 CMP The buses look good.

07 04 31 09 CDR All right. Now, wait a minute. Let me mark my ... Let's go through this. The SPS INJECTOR VALVES are closed. The HELIUM VALVES are - Hold it. GIMBAL MOTORS are OFF.

07 04 31 24 LMP GIMBAL MOTORS are OFF.

07 04 31 25 CDR TVC SERVO POWER's OFF.

07 04 31 27 CMP TVC SERVO POWER.

07 04 31 28 CDR Okay, BUS TIES, two, OFF. And all residuals - -

07 04 31 33 CMP Stand by.

07 04 31 34 CDR Stand by. LIMIT CYCLE, ON.

07 04 31 37 CMP LIMIT CYCLE's ON.

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07 04 31 38 CDR ATT DEADBAND, MAX.

07 04 31 39 CMP MAX.

07 04 31 40 CDR TRANS CONTROL POWER, OFF.

07 04 31 41 CMP OFF.

07 04 31 42 CDR ROT CONTROL POWER DIRECT, two, OFF.

07 04 31 43 CMP That's two off.

07 04 31 44 CDR BMAG MODE, three of them, to RATE 2.

07 04 31 45 CMP RATE 2.

07 04 31 46 CDR ... deadband - No.

07 04 31 51 LMP Okay. That's it, my good friends.

07 04 31 53 CMP Yes.

07 04 31 54 LMP ... the Moon.

07 04 31 56 CDR All right. Let me tell you where the - to - to ...

07 04 31 57 CMP ...

07 04 32 01 CDR No, here it is ... to one --

07 04 32 20 CMP The HIGH GAIN is PITCH, MINUS 71. We got it, huh?
No. YAW, 11.

07 04 32 35 CDR Who ...?

07 04 32 37 CMP You did.

07 04 32 38 CDR No, I didn't.

07 04 32 39 LMP Where?

07 04 32 40 CDR YAW was 11. ... SPS midcourse.

07 04 32 46 CMP I don't see any reason for that.

07 04 32 48 LMP I don't either.

07 04 32 54 CDR ... supposed to ... times and it did.

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07 04 32 57 LMP ... that lucky.

07 04 33 04 LMP ... to get the seats to come out?

07 04 33 07 CDR (Laughter) Three days to work. I'm not going to worry about it. . . . - -

07 04 33 12 LMP ... best things there are. Why don't we break out the TV camera?

07 04 33 24 LMP TV starts at 55, and it's now 33.

07 04 33 28 CDR All right. Why don't we do that?

07 04 33 29 LMP All right. Good.

07 04 33 39 CMP How come I got all the water all over my feet?

07 04 33 42 LMP It probably came off the - -

07 04 33 44 CDR What the hell spilled those?

07 04 33 45 LMP I'll tell you what it came off. . . .

07 04 33 50 CMP It really got wet.

07 04 33 52 CDR Here's Al Bean's pencil. It's always floating by. It's a floater. Intercept it. Now there's a - -

07 04 34 00 LMP TV, huh?

07 04 34 03 CDR Here, I'll help you rig this thing. Hold this . . .

07 04 34 11 LMP Why don't I hand it to you?

07 04 34 12 CDR All right.

07 04 34 13 LMP And I'll plug it in here, and you can hand it - handle it there.

07 04 34 16 CDR All right. That's a good idea.

07 04 34 19 LMP That . . . needs to be wiped off by Dick Gordon . . .

07 04 34 23 CDR . . . he's got the lens cover off.

07 04 34 27 LMP Okay.

07 04 34 40 LMP Okay, you ought to be able to lock up on the high gain.

07 04 34 43 CDR Right now?

07 04 34 45 LMP Not now, but as soon as we get - ACQ.

07 04 34 50 CMP What was the ACQ time?

07 04 35 06 LMP The ACQ time's 40:42.

07 04 35 10 CMP ... out in daylight. ... burned quite a ways in the darkness, didn't we?

07 04 35 18 CDR Yes.

07 04 35 28 CDR Hand me a cable.

07 04 35 30 LMP Okay. I'm going to hand you - no cable.

07 04 35 34 CDR No, when I hand you that, maybe you can give me one end of it.

07 04 35 40 LMP Okay.

07 04 35 41 CDR Now, we'll place ... switch is off, which it is.

07 04 36 08 LMP ... thing comes out of the top (laughter).

07 04 36 11 CMP There's no doubt in your mind when that SPS engine ...

07 04 36 14 LMP ..., isn't she? It's a lot like ...

07 04 36 19 CMP ... a lot like ...

07 04 36 21 LMP Really smooth.

07 04 36 22 CDR Is that right? Did you see it light up? You ... get pushed backwards?

07 04 36 25 LMP Really smooth.

07 04 36 28 CDR I guess a 100-psi engine is so -

07 04 36 31 CMP So reliable.

07 04 36 32 CDR It's so reliable that below the state of the art
that they could just take them ...

07 04 36 37 CMP That's why they have 100 --

07 04 36 38 CDR ... use them.

07 04 36 39 CMP -- 100-psi engine, I guess.

07 04 36 41 LMP Yes.

07 04 36 46 CDR Wonder - wonder - wonder what the chamber pressure
is on something like the S-I?

07 04 36 50 LMP About 350, I bet you. ...

07 04 36 56 CMP Hey, Al Bean, do we have enough film to take a
color shot of the Moon?

07 04 36 59 CDR Christ, we ought to.

07 04 37 01 LMP As we're leaving it?

07 04 37 03 CMP I don't know.

07 04 37 04 LMP Still - or - still color or movie color?

07 04 37 11 CMP Still.

07 04 37 14 LMP Well, I don't know where the little bit of color
is. You only gave me the black and white. You
didn't give me any color.

07 04 37 21 CMP No. We had --

07 04 37 22 LMP ... color ...

07 04 37 25 CMP Here it is. Here it is. Here we go.

07 04 37 29 LMP We could sure do it.

07 04 37 34 CMP Yes, but we only have five or six pictures. Well,
it's worth one anyway, isn't it?

07 04 37 36 LMP ... Yes. What'll we use the others for?

07 04 37 40 CDR ... of the Earth.

07 04 38 06 CMP Get open my ... my star ...

07 04 38 27 CMP ... my jacket. There's a bootie. Got to be down there somewhere.

07 04 38 35 CDR No, it's ...

07 04 38 39 CMP ... are somebody's? Yours.

07 04 38 53 CDR ... may be Al Bean's.

07 04 38 55 CMP ... stand by together.

07 04 39 11 CMP Yes, here. Slip this out of ...

07 04 39 18 LMP Felt like more than a half a g, didn't it?

07 04 39 31 LMP Wouldn't you say?

07 04 39 36 CDR I don't know. These engines condition you for it. In Gemini - No, I'm serious. In Gemini, there was nothing except the Agena that gave you any thrust vector, and you never used it that much anyhow. We been in and out of the g-field pretty good. When we came down after 8 days, we got up to about two-tenths of a g and I thought I was pulling four g's - no shit.

07 04 39 57 CMP Yes.

07 04 39 58 CDR So, as soon as - then as soon Gordo said, "One g," you calibrate yourself, and you're okay from there on.

07 04 40 04 LMP Is that right?

07 04 40 05 CDR Yes.

07 04 40 06 LMP ...

07 04 40 38 LMP ... it somewhere.

07 04 40 40 CMP Okay.

07 04 40 46 CDR There they are.

07 04 41 03 CDR (Clears throat) Hello, Houston; Apollo 12 enroute home. (Clears throat) We've got a burn status

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report for you. The burn was on time. Burn time,
2 plus 11 --

TIME SKIP

- 07 21 06 42 CDR I was saying. It was 1.80.
- 07 21 06 54 CDR Sorry, sorry.
- 07 21 07 04 CMP Are we in AUTO?
- 07 21 07 07 CDR Yes. You're in AUTO.
- 07 21 07 14 CDR ...
- 07 21 07 17 LMP ... for the CAP COMM's sake.
- 07 21 07 23 CDR Yes. That's what I mean.
- 07 21 07 34 LMP Are these the right numbers?
- 07 21 07 36 CDR Yes. I had a ... there.
- 07 21 07 45 CDR It was wandering around in deadband, and that's so indicative of ...
- 07 21 07 53 CMP Here it comes. ...
- 07 21 08 13 CDR OO the ... the AGS ... get that stuff. God damn it! I don't care what anybody --
- 07 21 08 24 CMP Try 92.
- 07 21 08 26 CDR It's going to take the scientists ... pure scientists, and fly them, you'd better.
- 07 21 08 30 LMP ... you better ... at ...
- 07 21 08 39 CDR All that shit curdles my ... you know me. I'll tell you, I'd probably ... and you shove the program up your ass.
- 07 21 08 54 CMP Oh. Wait a minute, Pete. I'm sorry. God durn. We've got a maneuver now.
- 07 21 08 59 CDR Yes. Give me - give me the maneuver.
- 07 21 09 06 LMP Knocking.

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07 21 09 14 CDR God damn it!

07 21 09 16 IMP We're maneuvering. ...

07 21 09 22 CDR 90, 31, ...

07 21 09 25 CMP Hook her in over here.

07 21 09 37 CDR ...

07 21 10 16 CMP You're out there all alone, too, aren't you?

07 21 10 18 CDR I don't - I don't think - I don't think you and I will ever find ourselves so far out ... where we were miles from that freaking IM and all by ourselves in those ... suits.

07 21 10 46 CDR I'm still nervous because I felt I could - I really thought about it. Besides, I couldn't get nervous when I had to get the job done. Better to get with it.

07 21 10 59 CMP Where's my mike?

TIME SKIP

07 21 14 58 CDR ... that freaking cable. I stumbled over that bastard, I don't know how many times.

07 21 15 01 IMP It was laying flat on the ground, too. It wasn't ...

07 21 15 07 IMP ... the dirt off your foot.

07 21 15 08 CDR Yes. That's right. You'd have had to see that. When we get on that boat in that MQF, we'll just sit down there and really list all that shit.

07 21 15 25 IMP I don't think ...

07 21 15 31 CDR Well, you see, it was just like - How the hell you going to think about it. They wanted shit and I - had to put the rock box, and the - Colton [?] camera and the - the - those plus-Y gear pins. Now who is going to keep remembering to walk around the S-band antenna so you don't stumble over the cable every freaking time - -

- 07 21 15 54 LMP We could have - It was saying flat ... practiced it ... foot on the ground. ... dragged your feet a lot.
- 07 21 16 13 CDR Yes. I thought skipping was better than - than anything else for some reason. Although, when we were really going long distances, I ran the way you recommended.
- 07 21 16 23 LMP I tell you, I'd recommend that POGO to anybody. That son of a bitch was just like - either of those POGOs. Hey, you could take that one we got and put a - a air-bearing on the Z-axis; but, other than that, it runs the same way. And you could get something ... which is normally impossible ...
- 07 21 17 06 LMP ... that ALSEP ... ALSEP ... down ... nearly came unlocked ... it not only had a hole in it, but ... handle ...
- 07 21 17 43 CDR Yes. The whole freaking deal broke ... Those bags are ridiculous. And that Teflon is terrible out there. It broke!
- 07 21 17 55 LMP ...
- 07 21 17 57 CDR So did I.
- 07 21 18 17 CDR ... another thing, I could give a freaking ... At least you could bend over it. I've already said it several times over the radio, which is a good place to say it.
- 07 21 18 37 LMP Yes, I've noticed that.
- 07 21 18 42 CMP You were raising hell about it while I was laughing my ass off. You were really raising hell about some stupid device. What the hell was it?
- 07 21 18 50 LMP The scale.
- 07 21 18 52 CDR Oh, I remember that. Yes. ...
- 07 21 18 54 CMP I was just laughing my ass - really laughing my ass off.
- 07 21 18 56 LMP ... or something ...

07 21 19 01 CDR God damn, I knew I was ... I - I - ... had moved away the freaking water in the damn scale. The thing that's so stupid about it is that there's no way you can feel that scale unless you're an ape. Nobody thought about that. Nobody thought about - That's number one. Because the scale itself was so light, there was no spring tension on it at all which is what happened. It wouldn't zero out, you see.

07 21 19 28 LMP You turn it all the way out and you still --

07 21 19 30 CMP ... heavier in one-sixth g.

07 21 19 32 LMP Yes.

07 21 19 33 CMP Yes. The spring was - the spring was heavier in one-sixth g.

07 21 19 36 CDR And we --

07 21 19 37 LMP ... it up.

07 21 19 39 CDR We tore that son of a bitch apart and finally got it fixed; God damn.

07 21 19 45 LMP ... the whole thing the ... - you're right that it was the spring weight.

07 21 19 49 CDR I say, there's a lot of little things we did that they didn't think we'd do.

07 21 19 52 LMP Now, first they said, now if you tell us you're tired, you don't have to weigh the water ... all that shit ... the whole freaking deal.

07 21 20 07 LMP Oh, shit ...

07 21 20 12 LMP ... so I ... off the ...

07 21 20 24 CDR Yes. You did.

07 21 20 26 CMP Two or three ...

07 21 20 28 CDR Yes.

07 21 20 29 CMP ...

07 21 20 31 LMP ... somebody else ...

07 21 20 39 CDR I wished we'd had a BB gun on that thing - -

07 21 20 41 LMP No. I wished we had a - -

07 21 20 42 CDR - - we could shoot the shit out of any - -

07 21 20 44 LMP Pete, if we'd had to shoot ... you'd be ... hell out of ... that was good. ... that thing was ...

07 21 20 55 CDR Yes - -

07 21 21 01 CDR Oh, that's what I figured. As a matter of fact, I figured - I figured I'd break the son of a bitch open. Break that son of a bitch open, and we were going to get that goddamn ... out of there if it was the last freaking thing we did. Because I remember - but once you - You were the one who said it sometime along there. You know, if you don't get that RTG out, that's the end of the ALSEP ... we got long time to go ... I said, "Yes, that's right."

07 21 21 29 CMP ... - -

07 21 21 31 LMP All the way up - I was all the way up ...

07 21 21 34 CMP ...

07 21 21 36 LMP ... hotter ... our ...

07 21 21 55 CDR I could be hotter.

07 21 21 59 CDR I was surprised to know it wasn't blowing.

07 21 22 04 LMP ...

07 21 22 18 CDR I never was aware of any temperature, ever; doing the rock boxes or anything.

07 21 22 23 LMP Now ...

07 21 22 27 CDR Yes. That last rock box.

07 21 22 29 LMP ...

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- 07 21 22 30 CDR The last rock box; it's a good thing I thought about that SIDE brush down there, or we would have never got that bastard closed.
- 07 21 22 38 LMP I mean ...
- 07 21 22 42 CDR Yes.
- 07 21 22 44 LMP ... bigger ... we both had ...
- 07 21 22 55 CDR Could you imagine what a LM - could you imagine what the LM would be like after 3 days of getting in and out of that thing twice a day?
- 07 21 23 03 LMP ... reach over to the sides and get the ... DEPRESS ... just like that ... get out. Real tight one time ... Cast off. ... what we saw ...
- 07 21 23 35 CDR The only thing that's bothering me are all those engine, you know. Jesus, they were grinding to a halt.
- 07 21 23 41 LMP They sure were. ...
- 07 21 23 48 CDR Yes, but you can't - you can't clean them, completely. Probably you can wipe out what you can reach, but you can't get down there in the - ... wasn't she something. Like - like I noticed the purge valve. All around - all around where they said - -
- 07 21 24 09 LMP ... - -
- 07 21 24 10 CDR Oh, yes. All right around the top.
- 07 21 24 15 LMP ...
- 07 21 24 42 CDR Boy, you could really smoke with that hammer up there. Did you see what you did to that ...?
- 07 21 24 48 LMP Beat the hell out of it. And I can't understand now why ... just drive it in ... ground.
- 07 21 24 59 CDR I think - I think we must have been in different ground. And I - I - I can't wait - -
- 07 21 25 06 LMP ... never have gotten that ... down. ... 28 inches? I had to ... strain to pull the ... down. ... - -

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07 21 25 16 CDR Know what's going to happen?

07 21 25 18 LMP I ought to be a great hammerer by now. ... all bent out of shape.

07 21 25 21 CDR Know what's going to happen?

07 21 25 22 LMP What?

07 21 25 23 CDR The freaking 28 inches of core tube is going to be all the same.

07 21 25 25 LMP That's right. ... you watch, you'll see it ..., but I'm not convinced we were at the right crater at all.

07 21 25 33 CDR I don't know where the bench crater was. I really don't.

07 21 25 36 CMP It was that first one.

07 21 25 41 CDR ... was the Sun bothering you at all?

07 21 25 43 CMP Not yet.

07 21 25 50 CMP Go to FREE, Pete.

07 21 25 52 CDR Go to FREE, Pete. You're the FREE.

07 21 26 00 LMP ... about all last year ... Gives you a lot ... got a lot of different things to do.

07 21 26 24 CDR We never saw anything that resembled a transient vent. That's what Dick thinks.

07 21 26 28 LMP ... life ... you know like ... darn crater ... I thought I saw that ...

07 21 27 23 CDR Super, Dick, super. Are you marking on the Moon? Or is - -

07 21 27 31 CMP No - no, the Earth.

07 21 27 48 CDR God damn, I'm still cold.

07 21 27 57 CDR How about that - how about this deal like we - Wonder if that'd put warm air in like we did with our suits? Getting around the secondary coolant loops.

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07 21 28 14 CDR You have that cabin too cold (laughter). We'll consider it a malfunction and act accordingly.

07 21 28 27 CMP ...

07 21 28 33 CDR You looked already, huh?

07 21 28 35 LMP ...

07 21 29 00 CDR Oh, God. It's cold.

07 21 29 02 LMP ... primary glycol?

07 21 29 03 CMP Turn it on, Pete.

07 21 29 04 CDR Yes. ...

07 21 29 05 CMP That'll make him mad.

07 21 29 24 LMP ... can't understand why they couldn't cut down on it whenever ...

07 21 29 31 CDR I didn't quite understand that one either.

07 21 29 33 LMP Never did use the ...

07 21 29 35 CDR Oh, man; oh, man. ... that first day I really was ...

07 21 29 41 LMP ... I knew ...

07 21 29 48 CDR No, cold.

07 21 30 10 CDR Houston, 12.

07 21 30 16 CMP Don't thank too soon. I don't - I don't -

07 21 30 22 CDR Oh, we sure don't have - Hey, Dick? Well, never mind. No, we don't. Let's - let's get the high gain back. I wonder what the - What angles were those?

07 21 30 31 CMP Just a minute. All right. As soon as I get through with this maneuver, I'll tell you.

07 21 30 41 CDR Those ... guys ought to see that. Yes. Here.

07 21 30 47 CMP God damn it. Guess I'll --

07 21 30 49 CDR There you go. - -
07 21 30 50 CMP - - I've got to do that frigging series all over again.
07 21 30 54 CDR What?
07 21 30 56 CMP ...
07 21 30 58 LMP Hold this ...
07 21 31 04 CDR Houston, 12.
07 21 31 12 CDR Okay. Got a question for you.
07 21 31 14 LMP ...
07 21 31 21 CDR Anybody got any suggestions down there on how we can warm up the cabin a little bit? It's getting a little cool in here. Can we go - do like we did on launch day or whatever it is and maybe run the secondary loop without any coolant on it or something?

TIME SKIP

07 21 36 37 CMP Okay, you still with us? Yes, tell him to press that and I'll say that was three, and I press on and I'll do another trunnion bias. You don't have to worry about it.
07 21 36 54 CDR Now, Dicky-Dicky.
07 21 36 56 CMP This freaking flight would have killed us ...
07 21 36 59 CDR Control yourself. Control yourself.
07 21 37 04 CMP Freak you.
07 21 37 08 CDR Tell them when you get back.
07 21 37 10 CMP Tell them, hell!
07 21 37 34 CDR Ah-ha!
07 21 37 44 CDR Hey, that's our fault, Dick. Now don't get mad at them.

07 21 37 47 CMP That's our fault --
07 21 37 48 CDR We're moving --
07 21 37 49 CMP -- that's our fault, Houston. We're going to --
07 21 37 52 LMP ... God damn it ...
07 21 37 55 CMP All right, Ed, does that mean you want me to do
that first set of stars over again?
07 21 38 09 CMP Houston, 12.
07 21 38 15 CMP Okay. Thank you. I'm going to have to do another
trunnion bias and press on to star number 3.
07 21 38 37 CDR Where the freak is that shit coming from? Augh!
07 21 38 50 CDR ... nice and close on the inside.
07 21 39 12 CMP Yes, Pete. Okay.
07 21 39 16 CDR Got it. Thank you.
07 21 39 25 CMP Say, fellows. ... lose my comb. When I find it,
I'll ...
07 21 39 29 CDR And it's our fault that you didn't get the data --
07 21 39 32 CMP No, I mean it. I don't necessarily have to be ...
07 21 39 42 CDR We all know that they don't respond that fast down
at MCC anytime.
07 21 41 26 CDR The battery.
07 21 41 45 CDR Roger. Going to OMNI Delta.

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DAY 9

08 00 57 34 CMP Okay, f:5.6 at 1/250th. 125. Okay?

08 00 57 39 LMP 1/250th or 1/25th?

08 00 57 40 CMP 1/25th. ... is 1/25th. You're right.

08 00 58 14 CMP Yes.

08 00 58 24 CDR Al, the time is 192:58, so we'll go over to 193:30.

08 00 59 39 CMP Sure is pretty on the ..., too. ...

08 00 58 43 CDR Yes.

08 00 58 45 CMP That's really pretty. Really pretty.

08 00 58 52 LMP That's exactly what I thought.

08 00 59 24 CDR We got a shrimp cocktail.

08 00 59 26 LMP Huh?

08 00 59 27 CDR A shrimp cocktail.

08 00 59 40 CDR Oh, hell, I don't want a ...

08 01 01 15 LMP No. No. It's just the way it was. ...

08 01 01 38 LMP ... again.

08 01 03 05 CDR Yes. How do you do that, Al?

08 01 03 09 LMP Pour it on.

08 01 03 49 CDR You better sleep tonight, Al, ... a time sleeping tonight.

08 01 03 59 CDR (Laughter) There's no way you can avoid sleeping.

08 01 04 57 CDR Huh?

08 01 05 02 CDR Yes.

08 01 05 12 CDR Yes.

08 01 05 30 CDR ... right after ... bother me, ... no after ...
08 01 05 34 LMP Right after, yes.
08 01 05 36 CDR It doesn't bother me. It's going to be noisy as hell, but it's nice - I'll tell you, the one thing that it does when your ... is going to stop, and that's what it changes in noise level every once in a while, and that scares the living shit out of you.
08 01 05 48 CMP Houston, Apollo 12.
08 01 05 54 CMP Roger. Let me give you these angles on the GDC at this time. Okay. Roll, 072.25; pitch is 352.4; yaw is 081.55.
08 01 06 29 CDR Maybe you'll have to bypass.
08 01 06 39 CMP Yes. Roger. I'd like to get that other one later on before ... leave this attitude.
08 01 06 50 CDR Wait a minute. ... that's the glycol pump.
08 01 06 58 CDR No. If they had a bypass valve or something on the -
08 01 07 01 CMP What?
08 01 07 02 CDR On the glycol pump.
08 01 07 03 CMP On the what?
08 01 07 04 CDR On the LM.
08 01 07 05 CMP Oh, on the LM. ... pump on the LM?
08 01 07 08 CDR No. It was just noisy. No. If it'd run along at one level, you don't mind the noise. It's when something changes, though. You'll be laying there and all of a sudden the thing will go ahhh, and I'm going to go aughhh! ... (Laughter)
08 01 07 37 CDR Got them turned ... Al has to ... down to get them.
08 01 07 43 LMP ...
08 01 07 46 CDR ... in GDC, it will come back up, I think.

08 01 08 04 CDR Hey, the antenna's not on.

08 01 08 06 LMP ...

08 01 08 07 CDR Doesn't seem to be ...

08 01 08 20 CDR Yes, but it's not oscillating; that's the thing. Because, I said, the signal strength drops off, but the antenna is not oscillating.

08 01 08 30 CMP ...

08 01 08 33 CDR Well, the signal strength oscillates when the antenna is in the ... But now what's happened is the antenna is apparently driven off some amount and it's just staying there.

08 01 08 53 CDR Houston, 12.

08 01 08 57 CDR It looks like what the antenna's done now is driven to some position other than optimum, and it's just sitting there.

08 01 09 06 CMP It's driven in the same angles you have it set here.

08 01 09 08 CDR Yes, you're damn right ...

08 01 09 44 CDR Roger. WIDE BEAM width. Get caught up ...

08 01 09 55 CMP It's down to 3.8.

08 01 10 11 LMP I got to let this darned zipper down.

TIME SKIP

08 01 39 -- CDR What did I do wrong the last time?

08 01 39 -- CMP Changed speeds on the tape recorder. Going to a HIGH BIT RATE, LOW BIT RATE. You've got to change speeds for that. Turn it off. Change speeds, and then back on again.

08 01 40 -- CDR You got it.

08 01 40 45 CMP Man, is this chocolate pudding and butterscotch pudding ever good. You ought to try some.

08 01 41 00 CMP Not yet, Ed, not yet. Two more days and you can.

08 01 41 22 CDR That could be tomorrow. We need five?

08 01 41 24 LMP Yes. Yes.

08 01 41 28 CDR There's five.

08 01 41 29 CMP Five.

08 01 41 30 LMP Yes.

08 01 41 37 CMP Secondary electronics coming at you.

08 01 44 22 LMP Give me the ...

08 01 44 50 CMP Roger.

08 01 47 59 CDR Huh?

08 01 48 10 CMP Roger. Pitch - is about a minus 20 and yaw is about 190.

08 01 48 48 CMP ...

08 01 48 50 LMP Did you do all that?

08 01 48 51 CMP ... all the way.

08 01 49 16 CMP Okay, we're doing that. Pitch, 60; 240; WIDE BEAM width; MANUAL. Okay. It's there, Houston.

08 01 49 41 CDR Where are our funny hats; you know? Do you know what happened to our helmets?

08 01 49 52 LMP I'll wear that during reentry so I can hear better. ... around my head.

08 01 51 36 CDR Hit by lightning twice, huh? We're really lucky.

08 01 51 40 LMP We sure are.

08 01 51 45 CMP That could have ended the whole show right there, you know that?

08 01 51 48 CDR The good Lord wanted to test us out. Boom! Boom! You piss me off.

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08 01 51 58 CMP He just wanted to see if Al Bean really had nerves of steel like he keeps telling everybody.

08 01 52 02 LMP ...

08 01 52 04 CMP Didn't do a freaking thing.

08 01 52 06 LMP That's right. Not a freaking thing.

08 01 52 08 CDR That's right (laughter).

08 01 52 10 CMP Sure will.

08 01 52 11 CDR Al Bean's got nerves of steel, just like I do (laughter).

08 01 52 25 CDR Something freaking's going on here.

08 01 52 37 CDR That was shut off.

08 01 53 07 SC (Sneeze)

08 01 53 20 LMP You got any Afrin over there right now?

08 01 53 23 CMP ... Al ... in there, I'll get them.

08 01 53 26 CDR Well, those freaking bottles hardly put out anything.

08 01 53 27 LMP Sure do.

08 01 53 28 CDM Well, we better stay ...

08 01 53 34 CDR What? Ahhh.

08 01 53 36 SC (Sneeze)

08 01 53 38 CDR Yes. But if you've been squirting on it, you don't get a hell of a lot out of any of them.

08 01 53 43 LMP ...

08 01 53 46 CDR They're full of cotton, Al.

08 01 54 02 CMP That's funny, I don't even see nothing to clear my ears.

08 01 54 09 LMP ... right.

08 01 54 21 SC (Blowing nose)

08 01 54 46 LMP Not ... around here ...

08 01 54 55 CMP What the hell they got cotton inside for?

08 01 54 58 LMP ... trying to do it in zero g is shit.

08 01 55 03 CDR No, it's not shit because what happened when they - -

08 01 55 06 LMP It doesn't spray out, but it runs out, right in your freaking nose.

08 01 55 10 CMP Sniff it in.

08 01 55 12 LMP I think that would do it.

08 01 55 13 CDR I think - I think that would be better anyhow. Apparently, the guys complained about getting ... shots.

08 01 55 23 LMP Now you don't get any.

08 01 55 29 CDR (Laughter)

08 01 55 30 LMP Might as well not have this shit aboard.

08 01 55 55 LMP Bitch about that, too.

08 01 56 00 CMP Here ...

08 01 56 22 CMP You got it, Houston.

08 01 56 33 CMP That's correct.

DAY 10

09 00 22 22 LMP ...

09 00 22 27 CMP Do-do-doodle-da-do-da-do. Do-do-doodle-da-do-da-do. Takes almost 10 hours to start - no, 2 hours to start that up, doesn't it.

09 00 23 29 CMP Okay. Pitch is about minus 20 degrees; yaw is 190; and the AGC - I'll give it to you in clock code for 12 o'clock; it's about - about 45; in other words, I'd estimate about three-quarter full scale.

09 00 24 17 CDR Man, is that ... right now.

09 00 24 20 CMP Yes. Huh? Do-de-do-do-do-do.

09 00 24 24 CDR ...?

09 00 24 30 LMP I don't know.

09 00 24 36 CMP It could be. The S-band ...

09 00 24 39 CDR Could be that you could ... this side.

09 00 24 42 CMP Yes.

09 00 24 48 LMP Yes, I think ... on.

MUSIC (Rosemarie)

09 00 25 08 CMP Okay.

09 00 25 20 CMP Go ahead.

09 00 25 50 CMP Okay. I've got minus 60 and 240 already set up. Waiting for your call.

MUSIC (Wedding Bell Blues by the Fifth Dimension)

09 00 27 19 CMP Okay. I'm MANUAL. Going to REACQ.

09 00 27 56 CMP Roger. It's the same as before, Ed. Minus 20, 190, and about three-quarter full scale.

09 00 28 09 CMP ...

09 00 28 32 CDR ...

09 00 28 51 CMP Roger. On NARROW BEAM.

09 00 29 08 CMP Okay, Ed. Pitch looks like it's about minus - 12, yaw is 180, and the AGC peaked when I switched to NARROW and it's dropped off now to three-quarter full scale.

09 00 29 41 CMP (Singing with music) Do-de-do-de-do-de-do.

09 00 30 03 CMP Okay. ... 121, 41 ...

MUSIC (Baby, It's You by Dusty Springfield)

09 00 30 32 CMP What a day for ...

09 00 31 00 CMP I seem to be searching a little bit. You know, it looks like gain is creeping, not so straight yet, but it's gone up by about five-sixths; and the antenna position angles are pitch, minus 20, and yaw, 190.

09 00 31 35 CMP No, I don't see any at all right now.

DAY 11

10 04 12 33 CMP Get back there in yaw, you old bear.

10 04 12 40 CDR Getting pulse?

10 04 12 41 CMP Yes.

10 04 12 44 CDR Those ... will be firing all around you in a minute.

10 04 12 50 CDR Well, got the service module off. Now we'll start worrying about drogues and mains.

10 04 13 02 LMP Clouds and thunderstorms. Beautiful view out there --

10 04 13 07 CMP That horizon isn't much, is it, Al?

10 04 13 09 LMP No. It must have been there all along; it was just gray --

10 04 13 10 CMP Yes.

10 04 13 11 LMP -- and you didn't know it, see?

10 04 13 12 CMP Yes.

10 04 13 13 CDR We can't see freak all out here. Wonder where our service module is?

10 04 13 20 CMP Man, it's out there in the boonies. Look at all that crap we're leaving behind us.

10 04 13 23 CDR Yes. They always do.

10 04 13 26 CMP Thing got a perpetual yaw to the left.

10 04 13 29 LMP Wonder why?

10 04 13 31 CMP Got to - got to keep backing off to the right.

10 04 13 33 CDR Haven't got anything stuck or anything?

10 04 13 35 CMP No, no. Just doing that for some reason.

10 04 13 48 CMP There's the Moon.

10 04 13 49 LMP Where?

10 04 13 50 CMP Right in my window. Like it's supposed to be.
Right in the lower left-hand corner of my window.

10 04 13 57 LMP That's why I can't see it. Okay. You still
haven't got MAN ATT, three, RATE COMMAND.

10 04 14 04 CDR No. But he will when he goes to the DAP.

10 04 14 06 LMP Okay.

10 04 14 07 CDR Why don't you put that back to AUTO?

10 04 14 09 CMP Does that bother you?

10 04 14 10 CDR Yes.

10 04 14 11 CMP It doesn't matter where it is. You know that,
don't you?

10 04 14 13 CDR Oh, that's right. That's right. Entry, DAP
doesn't make any difference.

10 04 14 31 CDR That's another thing. I made it all the way
through 10 days one time.

10 04 14 38 CMP That's right, you did, didn't you?

10 04 14 39 CDR ... There's the Moon. I see it. Hello, Moon.

10 04 14 43 CMP There you go, Moon burner.

10 04 14 45 LMP It's really going, too, isn't it?

10 04 14 47 CDR We the one that's really going. We now up to
32 800 - -

10 04 14 51 LMP Hauling ass.

10 04 14 53 CDR You better believe. I think John Young said
hauling the mail.

10 04 14 55 CMP Hauling mail.

10 04 14 57 CDR I think I'd better take this and - going to lay
it flat.

10 04 15 03 LMP You want me to put that in the bag? Get it out of your way? You shouldn't have that on your lap.

10 04 15 07 CDR Why don't you drop it in the bag? That's a good place - -

10 04 15 08 CMP Good place for it.

10 04 15 09 LMP It won't hurt it.

10 04 15 10 CDR - - TSB - -

10 04 15 11 CMP It's going to come right off of it.

10 04 15 12 LMP No, it isn't. Not those four snaps. Might. But if it does, it does.

10 04 15 16 CMP Yes.

10 04 15 17 CDR Going straight to the floor, which is just - -

10 04 15 18 CMP Yes.

10 04 15 19 CDR - - be good a place as any for it.

10 04 15 21 CMP Ten minutes.

10 04 15 23 CDR Okay.

10 04 15 32 CDR We're getting down to the nubs, boy (laughter).

10 04 15 34 LMP I know it. That's good.

10 04 15 35 CMP A thousand pounds left is it (laughter).

10 04 15 38 LMP This is all we got from all that we left with.

10 04 15 50 CMP What time was sunset that or - moonset? That'll give me a - another gouge.

10 04 15 55 CDR Moonset. Moonset is 244:20:05. Where did it go? The Moon disappeared - -

10 04 16 05 LMP It's right there.

10 04 16 06 CMP It's right there.

10 04 16 07 LMP Up high.

10 04 16 08 CMP Look up - up left.

10 04 16 09 CDR Oh, yes.

10 04 16 24 CDR We're up to 33 7.

10 04 16 46 LMP Sprays the stuff, doesn't it?

10 04 16 48 CMP Yes.

10 04 16 50 CDR Yes. It's like - Yes, part of it's that throat. You're getting up the speed, Al. You're up to over 34 000.

10 04 17 04 LMP Fastest I've been this week. How about you?

10 04 17 09 CDR Me, too. Still zero g. (Sigh) 2900 miles to go to the ship. Oh, man. My ears hurt. Whew!

10 04 17 27 LMP Mine are in bad shape, too; the left one.

10 04 17 29 CDR My left - my left one, too. Suppose we have leftitis? Left moonitis?

10 04 17 34 LMP Left moonitis. We left it all right.

10 04 17 50 LMP Whether it's stopped up or not, there ain't no stopping it - just hurting.

10 04 18 06 LMP Less than 5 minutes.

10 04 18 21 LMP Do you feel heads-down? Do you feel - Think it's being strapped in this seat like this. Maybe it's just - -

10 04 18 28 CDR I know I'm heads-down.

10 04 18 29 CMP I think that's probably it. Feel like it's because you know you're heads-down - -

10 04 18 32 CDR Hey, there's the horizon. Hot damn. Hello, world! Hey, you're going to get moonset right on the schnocker.

10 04 18 44 CMP Yes.

10 04 18 46 CDR It's coming pretty fast. We is flat smoking the biscuit. God damn! We're going! Whooee!

10 04 18 56 CMP We're going 35 000 feet per second.

10 04 18 59 LMP We're hauling ass is right.

10 04 19 02 CMP Coming to 3 minutes, to the RRT.

10 04 19 07 LMP Got some high clouds and some low clouds down there. Got a lot of ocean.

10 04 19 16 CDR You're going to have moonset pretty quick.

10 04 19 19 CMP Three minutes.

10 04 19 20 CDR Hey, that's something else. Look at that. I wish I had a picture of that.

10 04 19 24 LMP Where is it?

10 04 19 25 CDR Right out the center hatch.

10 04 19 28 CMP Turn your camera on a minute. Turn your camera on a second, Al.

10 04 19 30 CDR Roger, Houston. Read you loud and clear. We're watching the moonset.

10 04 19 35 CMP Hey, Al, turn your camera on. Maybe you can get a picture of it for a couple of seconds.

10 04 19 38 LMP The camera's going this way, and that's up that way.

10 04 19 39 CDR Yes.

10 04 19 40 CMP Too far away, huh?

10 04 19 41 LMP It's way out of the - -

10 04 19 42 CMP Okay. Going under.

10 04 19 51 CDR And on my mark, you'll have moonset, Houston. You can check your time. 3, 2, 1 -

10 04 19 56 CDR MARK.

10 04 19 57 CDR Moonset.

10 04 19 58 CMP Boy. That thing really disappeared, didn't it?

10 04 19 59 LMP Thing likes to set, doesn't it?

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10 04 20 00 CMP Huh?

10 04 20 01 CDR Yes.

10 04 20 02 CMP It's flat gone.

10 04 20 03 CDR 18 or 19:45.

10 04 20 05 LMP It won't be long now. Babe, we're whistling in. You can tell we're lower.

10 04 20 09 CDR How about 35 481 feet per second?

10 04 20 13 LMP It's not bad. We're hauling our ass through here. Look out that - look out your side window. Son of a bitch!

10 04 20 25 CMP Making knots, aren't we?

10 04 20 26 LMP We're going.

10 04 20 27 CDR Okay.

10 04 20 29 CMP Couple minutes.

10 04 20 33 CDR You're right at the reentry attitude, and you're on the needles, right?

10 04 20 36 CMP Yes.

10 04 20 37 CDR Computer needles --

10 04 20 38 CMP We're at 21 --

10 04 20 39 CDR Computer needles --

10 04 20 40 CMP -- 21 --

10 04 20 41 LMP Two minutes.

10 04 20 42 CDR Okay. No, you're less than 2 minutes, Al.

10 04 20 44 CMP Yes --

10 04 20 45 CDR I better watch my hand here. I get that thing wrapped around that neck ring.

10 04 20 48 CMP ... 21. I'm going to start my clock at RRT.

10 04 20 50 CMP Okay. I'll give you a mark --

10 04 20 51 CDR I'll give you a hack.

10 04 20 52 CMP -- at RRT.

10 04 20 53 CDR Here, I'll --

10 04 20 54 CMP Get your other hand on your camera, too, for RRT.

10 04 20 55 LMP I got it. I'm thinking about it.

10 04 20 57 CDR Let me move that card over.

10 04 20 58 LMP Never fear. I've got that --

10 04 21 00 CMP Wanted to just remind you.

10 04 21 01 LMP I know it. I don't mind.

10 04 21 02 CDR I can't see that --

10 04 21 03 CMP I'll get you - I'll give you a mark. Give you a mark at 1 minute if you want.

10 04 21 09 LMP No, I'll just go ahead and go RRT.

10 04 21 10 CMP Okay.

10 04 21 19 CMP One minute.

10 04 21 31 LMP Sound a little weak over there.

10 04 21 33 CDR We're smoking in there.

10 04 21 39 LMP Boy, we sure are.

10 04 21 40 CDR Yes. Let me see, we begin blackout at -

10 04 21 45 LMP Look at those clouds. Cripe, it looks like we're right on them.

10 04 21 48 CMP Thirty seconds, Al.

10 04 21 49 CDR Yes.

10 04 21 50 LMP How high up are we? Do you happen to know?

10 04 21 52 CDR Four hundred thou --

10 04 21 53 CMP 400 000 at zero.

10 04 21 56 LMP Okay. Gee, we look low.

10 04 21 59 CDR Really whistling Dixie.

10 04 22 01 LMP Boy, we are hauling ass!

10 04 22 03 CMP You're going to slow down in just a minute.
Fifteen seconds.

10 04 22 05 LMP Okay. Standing by.

10 04 22 09 CMP Ten seconds. 5, 3, 2, 1 -

10 04 22 19 CMP MARK.

10 04 22 20 CDR Okay.

10 04 22 21 LMP 0.05g at 29. You still haven't got those things
in RATE COMMAND.

10 04 22 28 CDR Now he does. Are you happy?

10 04 22 30 LMP Yes.

10 04 22 33 CMP Turn your camera on.

10 04 22 34 CDR Yes. Look out your window. Is that it?

10 04 22 35 CMP Camera on?

10 04 22 36 CDR Look out your window.

10 04 22 37 CMP Turn it - your camera on!

10 04 22 38 LMP I've got it on. Cool it.

10 04 22 39 CDR Look at that son of a bitch.

10 04 22 41 LMP That's what it is, huh?

10 04 22 42 CDR Look our your side window (laughter).

10 04 22 43 CMP Stand by for 0.05g.

10 04 22 44 LMP I don't see anything ... - -

10 04 22 45 CDR Okay --

10 04 22 46 CMP 6, 7, 8.

10 04 22 47 LMP There it is.

10 04 22 48 CMP MARK.

10 04 22 49 LMP Look at that.

10 04 22 50 CDR There's - there you go. Hang on. You're going to burn in now.

10 04 22 53 LMP Look at that son of a bitch go!

10 04 22 54 CDR Yes.

10 04 22 55 LMP Mama mia! That's fantastic!

10 04 22 57 CMP Hang on to your hat, ass, and overcoat, gang.

10 04 22 58 CDR ...

10 04 22 59 LMP Okay. Keep us in how many g's?

10 04 23 01 CMP One-half.

10 04 23 02 LMP Half. That would be my guess.

10 04 23 03 CMP Here we go.

10 04 23 04 CDR There's one.

10 04 23 05 LMP Man, we're sinking in --

10 04 23 06 CDR Here comes the water. I'm getting the water all over me.

10 04 23 07 CMP One.

10 04 23 08 CDR Okay. Two g's.

10 04 23 11 LMP God. That's fantastic.

10 04 23 12 CMP Two. Three.

10 04 23 18 CDR Man. Am I getting the water (laughter).

10 04 23 22 CMP Four. Five.

10 04 23 28 CDR (Laughter) I'm getting soaking wet.

10 04 23 30 CMP Five and a half.

10 04 23 32 CDR (Laughter)

10 04 23 33 CMP Six.

10 04 23 36 CDR Got the EMS.

10 04 23 38 LMP Looks good.

10 04 23 40 CMP Six and a half.

10 04 23 46 CMP Come on, mama. Hold lift vector down, you bastard --

10 04 23 48 CDR There he goes.

10 04 23 51 CMP What's that?

10 04 23 52 CDR O₂ FLOW HIGH. No sweat (cough).

10 04 23 53 CMP Okay. Come out to four.

10 04 23 58 CDR Okay. Lift vector's up (cough).

10 04 24 01 CMP Lift vector's down.

10 04 24 03 CDR I mean down. She looks good. Now if I remember right -

10 04 24 12 CMP Coming up at 3g's.

10 04 24 16 CDR (Cough) If I remember my PAD --

10 04 24 17 CMP -- Stand by for V circular.

10 04 24 18 CDR 2:11. V circular.

10 04 24 19 CMP Okay. Two minutes. Stand by.

10 04 24 23 CDR Looks like it's going to hit it right on the money.

10 04 24 26 CMP MARK.

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10 04 24 27 CMP V circular. V lift vector up.

10 04 24 30 CDR Yes.

10 04 24 31 CMP And we'll be coming off of g's shortly. Okay. There's 3-1/2.

10 04 24 44 CMP It's coming up. We'll be getting some altitude here in a minute.

10 04 24 48 LMP There's some landmass back there.

10 04 24 53 CDR Thing's pretty steady.

10 04 24 56 LMP Sure is.

10 04 24 57 CMP Call off the bank angle for me, Pete.

10 04 24 59 CDR Do what?

10 04 25 00 CMP Call off the bank angles.

10 04 25 01 CDR Minus 67, minus 72.

10 04 25 02 CMP Okay. It's doing fine.

10 04 25 08 CDR Minus 69.

10 04 25 09 CMP Okay.

10 04 25 10 CDR It's through 62.

10 04 25 11 CMP That's where it is. We're climbing.

10 04 25 12 CDR Fifty-four.

10 04 25 13 CMP Back down to 2-1/2g's.

10 04 25 14 CDR Forty-nine.

10 04 25 15 LMP Coming up on 3 minutes, right?

10 04 25 16 CMP Yes.

10 04 25 17 LMP Okay. I want to be sure --

10 04 25 18 CMP Stand by.

10 04 25 19 CMP MARK.

10 04 25 20 CMP Three minutes.

10 04 25 21 LMP Tell me at 4 so I can stop the camera.

10 04 25 22 CMP I sure will. Okay. Lift vector up. Reverse at 56.

10 04 25 28 CDR Yes.

10 04 25 34 CMP Sixty-two; g is up to 2. Holding 2. Coming off of 2 a little bit. Call the bank angle for me.

10 04 25 44 CDR Plus 60.

10 04 25 45 CMP Okay. Periodically.

10 04 25 46 CDR You don't need it very often.

10 04 25 48 LMP We're really shooting for range now, aren't we?

10 04 25 50 CDR Plus 59.

10 04 25 51 CMP Yes. Sure are.

10 04 25 52 CDR We only got 350 miles to go, according to the EMS; 63, 64.

10 04 25 59 CMP It's getting there. It's going good. How does it feel?

10 04 26 01 LMP Feels great.

10 04 26 02 CMP Three thou? Okay.

10 04 26 03 CDR Feels good.

10 04 26 04 LMP What's our velocity?

10 04 26 05 CMP I don't know.

10 04 26 06 LMP Okay.

10 04 26 07 CDR Oh, it's about 18 000.

10 04 26 08 CMP Oh yes, I do, too. 17 5 -

10 04 26 10 CMP MARK.

[REDACTED] CONFIDENTIAL

10 04 26 12 CDR Seventy degrees, Dick.

10 04 26 13 CMP Okay. That's where it's going - -

10 04 26 14 LMP My gosh; that's smooth.

10 04 26 17 CMP That's where it's going. Okay. We're coming up off over the top. We're coming back in again.

10 04 26 22 CDR Yes.

10 04 26 24 CMP Everybody all set?

10 04 26 25 CDR Yes.

10 04 26 26 LMP Yes.

10 04 26 27 CMP Okay. Four minutes. Turn off your camera.

10 04 26 30 LMP I'm watching. Just a second more.

10 04 26 32 CMP Okay.

10 04 26 34 LMP Okay. That did it. Four minutes' worth of that.

10 04 26 35 CDR Now you've got to change the time or the - -

10 04 26 38 CMP Change the f-stop - -

10 04 26 39 CDR - - speed to 1/125th.

10 04 26 42 CMP Bank angle?

10 04 26 43 LMP Thank you.

10 04 26 44 CDR Sixty-five.

10 04 26 45 CMP That's right on. It's good. That's where it's going - -

10 04 26 48 CDR That's perfectly nominal. This one out the window is good.

10 04 26 55 CMP Two g's.

10 04 26 56 CDR Sixty-nine.

10 04 27 01 CDR Ought to be out of blackout.

[REDACTED]

10 04 27 02 CMP We're out. Should be out.

10 04 27 03 CDR Hello, Houston. You read Apollo 12? Out of blackout.

10 04 27 08 CC ...

10 04 27 11 CDR Okay. It's right on the money.

10 04 27 14 CMP Okay. We're taking our second dip in. We're taking our second dive in. We're up to 3g's. Below the 3g's, and it's tracking very smooth.

10 04 27 28 CDR The first time I got a shower at 6g's, I thought I'd wiped all the water out of the tunnel.

10 04 27 37 CMP Four g's. We're heading for 4 and we're doing great.

10 04 27 42 CDR Lift vector up. Reverse and bank of 56 minus --

10 04 27 46 CMP Yes. That's right. Right on --

10 04 27 47 CDR -- minus 60.

10 04 27 49 CMP Right on.

10 04 27 50 CDR Very good. Seventy miles to go according to the EMS. 9000 feet a second. Five minutes into the - into the deal.

10 04 28 00 CMP Okay.

10 04 28 03 CDR Seventy-one degrees' bank angle --

10 04 28 04 CMP Okay, Houston. We've got 50 miles to go on my mark.

10 04 28 07 CMP MARK.

10 04 28 12 CDR 8:04 is the drogue, gang.

10 04 28 14 CMP 5:55.

10 04 28 18 CDR 6:36, you want to watch your steam pressure, Al --

10 04 28 20 CMP Bank angle's good.

10 04 28 22 LMP Yes.

10 04 28 23 CDR Eighty degrees' bank angle. Running around 3g's.

10 04 28 27 CMP Okay, 3g's it is.

10 04 28 30 CDR Coming lift vector up.

10 04 28 31 CMP Lift vector 84, reverse is up --

10 04 28 32 CDR Going to 84.

10 04 28 33 CMP Okay. That's good.

10 04 28 36 CDR It's right on the money. It's asking for 95.

10 04 28 40 CMP So it is. Okay. It'll --

10 04 28 42 CDR -- 87 --

10 04 28 43 CMP -- be 4000 here in a minute --

10 04 28 44 CDR Okay. Six minutes and something.

10 04 28 48 CMP -- 4000 --

10 04 28 49 CDR Watch your steam pressure, Al.

10 04 28 50 LMP Okay.

10 04 29 03 CMP Coming up to 7 minutes.

10 04 29 04 CDR Okay. Holding 2g's.

10 04 29 07 LMP 8:04 is drogues.

10 04 29 10 CMP It's reversing.

10 04 29 11 CDR Reverse the bank.

10 04 29 12 CDR Sixty-four degrees. It's got it.

10 04 29 15 LMP Okay. Steam pressure's pegging now.

10 24 29 17 LMP MARK.

10 24 29 18 CDR Okay.

10 04 29 19 CMP Okay.

10 04 29 20 CMP 6:58 and pegged.

10 04 29 22 CDR Okay. It says we're - it says - -

10 04 29 24 CC ...

10 04 29 27 CDR Roger.

10 04 29 30 CMP Got the switch right there.

10 04 29 31 CDR Sixty-seven.

10 04 29 32 CMP Read it (cough).

10 04 29 33 CDR Okay.

10 04 29 34 CMP Stand by for the BOOST/ENTRY.

10 04 29 35 CDR Okay.

10 04 29 36 LMP Okay.

10 04 29 37 CDR I am going to call the altimeter off the peg.

10 04 29 39 CMP Okay. We're free falling at one g.

10 04 29 42 CDR Altimeter is off the peg.

10 04 29 43 CMP Okay. BOOST/ENTRY.

10 04 29 45 CDR BOOST/ENTRY.

10 04 29 46 CMP Read the rest.

10 04 29 47 CDR Okay, 50 K.

10 04 29 49 CMP PYROs?

10 04 29 50 CDR No. Not yet.

10 04 29 52 LMP Fifty K.

10 04 29 53 CDR SECS PYRO ARM.

10 04 29 54 CMP PYRO's armed.

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10 04 29 55 CDR Okay.

10 04 29 56 CMP Stand by for LOGIC?

10 24 29 57 CDR 30 000. Standing by for LOGIC and AUTO.

10 04 30 00 CMP Okay. We're coming straight down; one g.

10 04 30 01 CDR Okay.

10 04 30 02 LMP Okay. What altitude are we at?

10 04 30 03 CDR We're at - -

10 04 30 04 CMP Forty K.

10 04 30 05 CDR - - 42 000.

10 04 30 06 LMP Okay.

10 04 30 08 CDR What time on the clocks?

10 04 30 09 CMP 7 - 50.

10 04 30 10 CMP MARK.

10 04 30 11 CMP 7:50.

10 04 30 12 CDR Okay.

10 04 30 14 LMP I'm going to put on the camera.

10 04 30 15 CMP Okay. Put it on. 35 000.

10 04 30 16 LMP She's on.

10 04 30 18 CDR Hold it - to the LOGIC.

10 04 30 22 CMP Thirty K?

10 04 30 23 LMP Thirty K.

10 04 30 24 CDR Thirty K. ELS LOGIC and AUTO - -

10 04 30 25 CMP LOGIC's on. AUTO?

10 04 30 26 CDR In AUTO.

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10 04 30 27 CMP Stand by for drogues.

10 04 30 28 LMP Okay.

10 04 30 29 CDR Drogues at 24. What's the time on the clock? 8:04.

10 04 30 32 CMP 8:12, 13; 8:14; 8:15, 16; 8:18. There go the drogues.

10 04 30 38 CDR There it goes.

10 04 30 40 CMP We got our drogues?

10 04 30 41 CDR We got drogues.

10 04 30 42 LMP Good show.

10 04 30 43 CDR Right. Okay.

10 04 30 44 LMP We got drogues, Houston.

10 04 30 47 CMP Yes, we got two good drogues.

10 04 30 49 LMP Man. This is hauling it, isn't it?

10 04 30 52 CDR All right. Standing by for 10 K --

10 04 30 54 CMP Stand by.

10 04 30 55 CDR -- and cabin pressure --

10 04 30 56 LMP Okay. Cabin pressure looks good.

10 04 30 57 CMP Okay.

10 04 30 58 CDR My ears are going okay.

10 04 30 59 LMP Mine's okay.

10 04 31 00 CMP Mine are okay.

10 04 31 01 CDR Very good. What do we do with this confuser?

10 04 31 02 CMP Just let it run. Write it down.

10 04 31 04 CDR Okay. Houston, we're at 15.84 and 165.17.

10 04 31 12 CMP And those drogues look gorgeous.

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10 04 31 16 LMP They're hanging in there, aren't they?

10 04 31 18 CDR Okay, stand by - -

10 04 31 19 CMP 15 000 feet.

10 04 31 20 CDR - - for the mains.

10 04 31 21 CMP Okay. Stand by for the mains, Al.

10 04 31 22 LMP I'm standing by, babe.

10 04 31 29 CMP At 11 000, standing by for mains.

10 04 31 30 CDR Going to free fall.

10 04 31 33 CMP There go the mains!

10 04 31 34 CDR Hang on. We've got all three. A good show.

10 04 31 35 CMP Hang on. They're not dereefed yet.

10 04 31 37 CDR I know it.

10 04 31 39 LMP Three, but they're not reefed. There they go. They're dereefed.

10 04 31 42 CMP A couple of them are. One of them isn't yet. There they go. Hello, Houston; Apollo 12. Three gorgeous, beautiful chutes.

10 04 31 50 CDR We got all three.

10 04 31 51 CMP And we're at 8000 feet on the way down in great shape.

10 04 31 52 CDR Okay. Let's get on the checklist.

10 04 31 53 LMP Okay.

10 04 31 54 CMP - - . - -

10 04 31 55 LMP Okay. VHF ANTENNA - -

10 04 31 56 CDR Main deploy; SURGE TANK O₂ valve, OFF.

10 04 31 58 CMP SURGE TANK O₂ valve is OFF.

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10 04 32 00 CDR REPRESS PACKAGE, OFF.

10 04 32 01 CMP REPRESS PACKAGE, OFF.

10 04 32 03 CDR DIRECT O₂ valve, OPEN.

10 04 32 04 CDR OPEN.

10 04 32 05 CDR VHF ANTENNA to RECEIVE - -

10 04 32 06 AB Apollo 12, Apollo 12, this is Airboss. Over.

10 04 32 10 CDR Airboss, we read you loud and clear. We're okay.

10 04 32 11 CMP Keep reading to me. DIRECT O₂, ON.

10 04 32 13 CDR VHF AM to SIMPLEX - -

10 04 32 14 AB Roger, Apollo 12. Send your contact report, please.

10 04 32 16 CMP - - ... SIMPLEX.

10 04 32 18 LMP - - CABIN PRESSURE, CLOSE - -

10 04 32 19 CDR Roger. We're 70.85, 165.16. 10.4 miles - -

10 04 32 24 LMP COMMAND MODULE RCS LOGIC, ON.

10 04 32 26 CMP LOGIC's ON.

10 04 32 27 LMP COMMAND MODULE PROPELLANT to DUMP.

10 04 32 28 CMP DUMP.

10 04 32 30 HORNET Apollo 12, this is Hornet. Would you say again? Over.

10 04 32 38 R 12, this is Recovery. Tallyho; I have a visual.

10 04 32 46 R Hornet, this is Recovery. Over.

10 04 32 48 HORNET Hornet. Over.

10 04 32 50 R This is Recovery. I am 3 miles north of the 300 radial. Three miles - I have a visual. He is bearing 135 for me - -

10 04 33 03 AB ... 6000 - -

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10 04 33 07 R - - On his ... chutes, he looks good.

10 04 33 10 HORNET Hornet. Over.

10 04 33 13 R Zero ...

10 04 33 14 HORNET Roger. ... zero.

10 04 33 26 LMP What's our altitude? What's our altitude?

10 04 33 31 R The command module is just above the tops of the clouds --

10 04 33 34 CMP PURGE.

10 04 33 35 R -- at 5500 feet.

10 04 33 38 CDR What's the - oh - 55? Okay. PURGE. That son of a bitch went --

10 04 33 43 P-1 Photo 1 has ... zero zero.

10 04 33 46 CDR I don't go for that jazz.

10 04 33 48 LMP What's the altitude?

10 04 33 49 P-1 Okay --

10 04 33 50 CMP 4500.

10 04 33 51 P-1 -- 22 ... 200.

10 04 33 53 CDR All right, Al.

10 04 33 54 LMP Yes.

10 04 33 55 CDR FLIGHT and POSTLANDING BUS A and B, BAT C, close.

10 04 33 57 LMP They're closed.

10 04 33 59 CDR FLIGHT and POSTLANDING MAIN A and B, two, open --

10 04 34 00 R This is Recovery. I still have a visual. He's just beginning to sink into the clouds.

10 04 34 02 LMP They are open.

10 04 34 03 CDR cb RAD HEATER OVERLOAD, open.

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10 04 34 06 LMP Okay.

10 04 34 07 AB Apollo 12, Apollo 12, this is Airboss transmitting in the blind - -

10 04 34 10 CMP That's all right. You guys go ahead.

10 04 34 11 LMP SPS PITCH and YAW, open.

10 04 34 12 AB -- Your primary transmitter is inoperative, inoperative - -

10 04 34 15 LMP What's he saying? - -

10 04 34 16 AB -- Switch to SECONDARY - -

10 04 34 17 CDR SPS PITCH and YAW - -

10 04 34 18 AB -- 259.7 - -

10 04 34 21 CMP Switch to SECONDARY.

10 04 34 22 AB -- and kill your VHF - -

10 04 34 23 CDR -- ... - -

10 04 34 24 AB We have a visual on you. We have a visual on - -

10 04 34 26 CMP ... that ... in VHF - -

10 04 34 28 CDR BAT RELAY BUS, OPEN.

10 04 34 29 R ... I've lost visual contact - -

10 04 34 30 CDR He's over there - -

10 04 34 31 R -- He's hit the clouds. I'm on the way down - -

10 04 34 32 CDR BAT RELAY BUS, OPEN, Al?

10 04 34 33 LMP It's OPEN.

10 04 34 34 CDR Okay. COMMAND MODULE RSC PROPELLANT, two, OFF.

10 04 34 35 R Tallyho; another visual: 4 miles. Getting N130 - -

10 04 34 40 CDR CABIN PRESSURE RELIEF valve to DUMP.

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10 04 34 41 R -- passing through 4000 feet.
10 04 34 46 CDR ELS - AUTO.
10 04 34 49 LMP It's AUTO.
10 04 34 50 CDR ELS LOGIC, ON. FLOODLIGHTS to POSTLANDING.
10 04 34 54 R This is Recovery, passing through 3500.
10 04 34 56 LMP What did you say about the LOGIC?
10 04 34 57 CDR ON.
10 04 34 58 R Range 4 miles on the command module --
10 04 34 59 LMP It's ON.
10 04 35 00 CDR Okay. FLOODLIGHTS, POSTLANDING.
10 04 35 01 R -- three chutes. Looks good --
10 04 35 03 CDR 800 feet. CABIN PRESS RELIEF, CLOSE.
10 04 35 05 CMP Okay.
10 04 35 06 CDR Is it 800 feet yet?
10 04 35 08 CMP Hello, Airboss; this is Apollo 12.
10 04 35 09 CDR Hello, Airboss; this is Apollo 12. How do you read, Airboss?
10 04 35 14 LMP Wait, I'll check the ... --
10 04 35 15 HORNET Apollo 12, this is Hornet. I hear you loud and clear. How me? Over.
10 04 35 19 CMP Roger, Hornet --
10 04 35 20 CDR Okay. Read you the same. We're all okay.
10 04 35 22 AB Roger. All okay. Conditions normal.
10 04 35 24 CMP Roger. Understand.
10 04 35 26 AB ... You look great --

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10 04 35 27 CDR CABIN PRESSURE RELIEF, CLOSE at 800 feet.
10 04 35 29 CMP ... 800 feet. We're at 10 right now.
10 04 35 33 R Recovery 1 has visual.
10 04 35 37 CDR Okay.
10 04 35 39 R This is Recovery --
10 04 35 40 HORNET Apollo 12, this is Hornet Combat. We have you visual --
10 04 35 42 R -- Seems to be about 1500 feet above the water. Three good chutes.
10 04 35 44 HORNET -- So do our helo's inbound to your position. Over.
10 04 35 45 CMP Roger.
10 04 35 46 LMP Roger.
10 04 35 47 CDR Roger.
10 04 35 48 CMP Stand by. Thousand feet coming up.
10 04 35 49 CDR Go ahead, Dick. 800 feet.
10 04 35 52 CMP MARK.
10 04 35 53 CMP A thousand.
10 04 35 54 CDR CABIN PRESSURE, CLOSE.
10 04 35 56 CMP 900, 800 --
10 04 35 57 LMP CABIN PRESSURE, CLOSE.
10 04 35 58 CDR MAIN BUS TIES --
10 04 35 59 LMP MAIN BUS TIES are coming OFF --

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