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COMPOSITE AIR-TO-GROUND AND ONBOARD VOICE
TAPE TRANSCRIPTION OF THE GT-4 MISSION (U)
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

August 31, 1965

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NASA PROGRAM GEMINI WORKING PAPER No. 5035

COMPOSITE AIR-TO-GROUND AND ONBOARD VOICE
TAPE TRANSCRIPTION OF THE GT-4 MISSION

Prepared by: Mission Training Section

Authorized for Distribution:


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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

August 31, 1965

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CAPE KENNEDY

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

CC IGNITION!

00 00 00 CC Bolts. LIFT-OFF!
00 00 02 C Counting, we're on our way, Buddy.
00 00 09 C Roll.
00 00 20 CC Gemini 4, did you get your roll?
00 00 20 C Roger. Roll complete. Pitch.
00 00 24 CC Roger. Roll is complete. Did you get your pitch?
00 00 26 C Pitch. Roger. Booster pressures are good, Ed.
00 00 27 CC Roger.
00 00 28 P Roger. Systems are all good over here.
00 00 30 C Swell. Boy that sun is bright.
00 00 35 P Right.
00 00 44 CC It will be 50 seconds on mark, GT-4.
00 00 50 CC MARK!
00 00 51 C Mode II delayed.
00 00 56 P Cabin is holding at 5.5.
00 01 05 CC Okay, you're looking good here.
00 01 13 P Cabin is hold--
00 01 18 CC Say again, Gemini 4.
00 01 31 CC Gemini 4. It will be 1:40 on my mark, and we are
not reading you very clearly. 1:40--
00 01 40 CC MARK!
00 01 44 CC Gemini 4. Do you read Cape CAP COM?
00 01 51 CC Gemini 4, Gemini 4. Do you read Cape CAP COM?

[REDACTED]

00 02 10 CC Gemini 4, Houston CAP COM.
00 02 12 C Gemini 4 is GO for staging.
00 02 14 CC Roger, read you loud and clear. You look okay.
00 02 25 P Update received.
00 02 27 CC Roger on your update.
00 02 34 C Good staging.
00 02 36 CC Roger. We confirm good staging.
00 02 50 C Guidance initiated.
00 02 52 CC Roger, guidance initiated.
00 03 04 C The errors have come in. They're just right on null now.

00 03 08 CC Say again, Gemini.
00 03 10 C I say, our errors have come into a null.
00 03 13 CC Roger.
00 03 15 C Just like they are supposed to.
00 03 17 CC Yes. Everything is going great.
00 04 01 CC Gemini 4, Houston gives you a GO.
00 04 04 C Roger. Looks great up here.
00 04 24 CC Gemini 4, Houston gives you a GO.
00 04 27 C Roger. We're GO.
00 04 29 CC Roger.
00 05 00 CC Coming up on 0.8. I'll give you a mark ($V/V_R = 0.8$)

00 05 08 CC MARK! 0.8.
00 05 10 C Mode III.
00 05 34 C SECO.
00 05 36 CC Roger, SECO.
00 05 49 CC Gemini 4, you're GO.
00 05 54 C Roger
00 05 57 CC Gemini 4, this is Houston CAP COM. You're GO.
Do you read?

00 06 00 C Roger, I read you.
00 06 18 CC Gemini 4, try your UHF-2, and give us your IVI readings as soon as you can.
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00 06 34 CC Gemini 4, Houston CAP COM.

00 06 36 C Hello there, Houston. Gemini 4 here, how do you read?

00 06 39 CC I read you a little bit garbled. Give me your IVI readings.

00 06 43 C Roger. I have 20 forward, 11 right, 2 down.

00 06 48 CC Roger. 20 forward, 11 right, and 2 down.

00 07 07 CC Gemini 4, are you on UHF-2 now?

00 07 09 C ...turning around. Affirmative on UHF-2 now and ...

00 07 12 CC Roger.

00 07 14 C Okay. I got the old second stage. It's spinning away and looks pretty.

00 07 18 CC Roger. You say, it's spinning away?

00 07 21 C Roger. It's starting to tumble a little.

00 07 23 CC Roger.

00 07 34 CC Roger. Gemini 4, I have a new 1 alpha time for you.

00 07 38 C Okay.

00 07 39 CC It's 14:03.

00 07 46 P Understand, 1 alpha 14:03.

00 07 49 CC Roger.

00 07 56 CC Gemini 4, your orbit is 87 by 153.

00 08 00 C

00 08 02 CC Roger.

00 08 14 CC Hey, Jim. How fast is that booster tumbling?

00 08 18 C I can't give you that. going around.

00 08 23 CC Is it just slowly rotating?

00 08 25 C Roger, it's slowly rotating.

00 08 27 CC Roger, okay.

00 08 28 C It doesn't look big.

00 09 00 CC We'll lose you in about 30 seconds, Jim.

00 09 02 C Okay.

00 09 05 CC How do you like that?

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00 09 15 C Before I leave you, let me tell you the lights are working.

00 09 18 CC The what's working?

00 09 20 C The lights on the booster are flashing.

00 09 22 CC Okay.

00 09 24 C ... lot better off.

00 11 08 P Okay, 2-C is 24, 6; 2-B is 24, 5.5; 2-A is 24, 6; 1-C is 24, 12; 1-B is 24, 11; 1-A is 24, 7. Control is 26, 5; S-2 is 27; S-1 is 27; Main is 23.

CANARY ISLANDS

00 14 22 CC Gemini 4, Canary CAP COM.

00 14 23 C Hello, Canary. Gemini 4.

00 14 25 CC Roger. Give me your quantity switch to READ for 15 seconds.

00 14 36 CC Your status green from here.

00 14 37 C Roger, thank you.

00 14 44 CC Stand by to copy G.m.t., LO, apogee, and perigee.

00 14 49 C Roger.

00 14 50 CC 15 15 59. 152 by 87.

00 14 58 C 152 by 87. Roger.

00 15 00 CC Roger. Standing by for your air to ground check.

00 15 04 C Roger. We're on UHF-2 at this time. Give you a count 1, 2, 3, 4, 5. ... HF antenna at this time.

00 15 12 CC Say it again. Which antenna?

00 15 14 C We are not going to extend the HF antenna.

00 15 17 CC Roger, we understand. Shift to UHF number 1, and give me a count, please.

00 15 35 CC Gemini 4, Canary CAP COM. Shift to UHF number 1 and give me a count, please.

00 15 42 P Gemini 4, am transmitting UHF number 1. 1, 2, 3, 4, 5. 5, 4, 3, 2, 1, Gemini 1.

00 15 49 CC Roger, Canary CAP COM. Read you loud and moderate background noise.

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00 15 53 C Roger, I understand.

00 16 00 CC Gemini 4, Canary CAP COM. Be advised switch radiator to FLOW at 40:00.

00 16 06 P Roger, radiator to FLOW at 40:00.

00 16 48 CC Gemini, Canary. Stand by to copy new 3-1 data.

00 16 51 P Roger. Standing by.

00 16 53 CC 167. 3+35. 16 48 34. 2+18. 8+47.

00 17 08 CC GETRC 01 32 35.

00 17 22 P Roger, Gemini 4. Would say again the first three quantities, please?

00 17 25 CC Roger. I say again. ΔV 167. 3+35.
GETRC 01 32 35. Read switch OFF, please.

00 17 46 P Roger. New quantities 3-1: 167. 3+35. 14 48 34.
2+18. 8+47. 01 32 35.

00 18 03 CC Negative. GMTRC is 16 48 34.

00 18 12 P Roger, 16 48 34.

00 18 15 CC Roger. How far are you from the launch vehicle?

00 18 19 P Roger. Right now we're alining the platform and it's going below our lower left, and we'll be going down after it in a moment. We're after it right now.

00 18 27 P We presently don't have it in sight; we aline the platform.

00 18 31 C I have it sighted this time. It's directly below me about 400 or 500 feet. I'm going to thrust down

00 18 37 P Roger. We have it below us right now, exactly below us at about 400 to 500 feet. The light is coming through quite clearly.

00 18 44 CC Roger.

00 18 48 P We're passing over a big desert now.

00 18 59 CC Canary, Gemini 4. Be advised there isn't enough time to get a good platform aline there. I don't want this thing to get too far from me.

00 19 09 CC Roger, I understand.

00 24 11 CC Gemini 4, Houston CAP COM.

00 31 09 CC Gemini 4, Houston CAP COM standing by.

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00 31 21 CC Gemini 4, Houston CAP COM standing by.
00 31 45 CC Gemini 4, Houston CAP COM standing by.
00 32 04 CC Gemini 4, Houston CAP COM.
00 32 59 CC Gemini 4, Houston CAP COM.
00 41 54 P Radiator is going to FLOW at 41. Elapsed time of 41.

CARNARVON

00 43 41 CC Gemini 4, Carnarvon CAP COM.
00 43 42 C Hello, Carnarvon. Gemini 4.
00 43 44 CC Roger. Give me your status.
00 43 45 C Roger, we're GO. Everything looks great.
00 43 49 CC Roger, Gemini 4. You look good here on the ground. Can you give me your battery readouts, please?
00 43 53 P Roger, stand by. Here they come.
00 44 20 CC Gemini 4, you can turn your radiator, --correction, your secondary pump off. Your evaporators are normal. Your radiator looks good.
00 44 27 P Roger. Evaporators NORMAL, and secondary pump A OFF. Understand radiator looks good.
00 44 33 CC Okay. Give me about 10 seconds on your Quantity Read Switch.
00 44 37 P Roger. Coming on.
00 44 39 CC Roger.
00 44 50 CC I'm standing by for your battery readouts.
00 44 59 CC While you're doing that, can the Command Pilot give me a little information on the booster, the distance, what you have to do to get that close to see it, and how's the light working?
00 45 07 C Roger. The light's working fine. I can't tell exactly how far it is though, I guess I'm probably a half a mile or so. The booster started tumbling right after we came off of it. I tried to dump the rates down, and I got them down till it looked like one-quarter degree per second but as soon as we got off I got around to see it, it was tumbling.

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00 45 25 CC Okay. How much ΔV did you use before you got there?

00 45 28 C I got about 30 ft/sec showing on my window there.

00 45 32 CC Okay.

00 45 34 C The booster fell away quite rapidly and got below us like there was a considerable difference in our velocity, and I let the thing get too far from me.

00 45 44 CC All right. Can you give me the battery readout? If they look good I can give you a GO for 3-4. and we're standing by for a blood pressure from the Pilot.

00 46 40 C Carnarvon, this is Gemini 4. I see lights of a town below me.

00 46 44 CC Okay. 3,2,1.

00 46 48 CC MARK!

00 46 52 CC Did you get that time hack?

00 46 55 P Roger, got that time hack, and am standing by for the ΔV up.

00 46 58 CC Go ahead.

00 46 59 P Roger. 1. 1-A and 2-B are 24, and they all look good.

00 47 03 CC Roger.

00 47 04 P ... 1-A is 6. 1-B is 10. 1-C is 11. 2-A is 6. 6-B is 5, and 2-6 is 6.

00 47 13 CC Okay. Showing 24 on 2-A, B and C also?

00 47 16 P Roger. I'm getting 24 on all my adapter batteries.

00 47 19 CC Okay. Your readings are good.

00 47 22 P ... All checks out good.

00 47 23 CC Okay. Giving you a GO for 3-4, changing your TR time.

00 47 32 CC And I'm giving you a new load.

00 47 35 P We got the update coming in.

00 47 37 CC Okay, I've got the load ready, you got the new TR time. We're standing by for that Pilot's blood pressure. You ready to copy your update time?

00 47 42 P Roger, I copy the update time, ... the blood pressure.

00 47 47 CC Okay. 2-1. 170. 3+40. 01 32 39. 2+18. 8+32. Over.

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00 47 54 P Roger. We're coming up on the booster now, and you can see the daylight starting to break. The lights are quite visible, and I estimate that we're probably in the vicinity of three-quarters of a mile from the booster at the time now. The lights are very easy to see, and the horizon is quite easily defined at this time. We've unstowed the Contarex, the Hasselblad, the 16-mm and the blood pressure cuff. We're both finding that there is not as much velcro as we'd like to have in the spacecraft. We feel like we need more storage of loose items. Same thing that John and Gus found.

00 48 10 P Roger. Say again the first four quantities, please.

00 48 13 CC I say, what you want repeated?

00 48 15 P Roger, the first four quantities.

00 48 17 CC 2-1: 170. 3+40. 01 32 39. Over.

00 48 36 P Roger. Would you say them with a little more pause between them, please.

00 48 39 CC Does he want to try them again?

00 48 41 P Would you say them with more pause between the,...
I ...

00 48 45 CC 2-1: 170. 3+40. 01 32 39. 2+18. 8+32. Over.

00 49 01 C This is Jim here. And I'm having a lot of difficulty telling how far out I am from the booster. I can see the two lights flash occasionally, and that's the only thing that tells me where I am at all - as far as distance with respect to the booster. I didn't get the time to aline my platform well before I went into ...

00 49 12 P Roger. Understand, I read you. 1: 170. 3+40. 01 32 34, 2+18. 8+30.

00 49 24 CC On your GETRC that's 01 32 39. Over. 9.

00 49 25 C Hello, Carnarvon. Gemini 4.

00 49 30 P 01 32 39.

00 49 30 C Roger. We're GO. Everything looks great.

00 49 32 CC Roger, that's affirmative. Your orbit is about 86.8 by 150.6.

00 49 37 C Roger. Stand by. They're coming.

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00 49 38 P Roger. 86.8 by 150.6. Sounds good.

00 49 42 CC Roger. We need that blood pressure on the Pilot.

00 49 44 P Roger, that will be coming up next.

00 49 55 C I'm going to ... a little bit more ...

00 49 45 CC And I'll need your accelerometer bias.

00 49 50 P You'll have to stand by for the accelerometer bias.

00 49 52 P Hand me the ... book, will you, Jim?

00 49 54 C The data book.

00 49 55 P Yes. I just can't keep the booster in sight and ...

00 49 58 CC Okay. You can give it to Guaymas.

00 50 00 C I'm afraid you'll have to wait for another orbit or two.

00 50 01 CC All righty.

00 50 06 C Your light is on in case you're going to read it.

00 50 07 C Huh?

00 50 08 C Your lights are on.

00 50 09 P Yes.

00 50 18 C Roger. Evaporator NORMAL and Secondary Pump A OFF. Understand everything looks good.

00 50 28 C Roger. Coming ON.

00 50 29 CC

00 50 37 P Blood pressure is coming in.

00 50 39 CC Roger.

00 50 52 P Roger.

00 51 01 P Why don't you do that, Jim?

00 51 02 C Roger. The light's working fine. I can't tell exactly how far up I am from it. I guess I am probably around a half a mile or so. The booster started tumbling as we came off of it. I started to damp the rates down, and I got them down to what looked like a quarter degree per second, but as soon as we came off and I got around to see it, it was tumbling.

00 51 22 CC

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00 51 25 C I've got about 30 ft/sec showing on my windows here. The booster fell away quite rapidly and got below us like there was a considerable difference in our velocities, and I've been struggling here to not let the thing get too far from me.

00 51 45 CC

00 52 06 P Roger. Your adapter battery readouts are coming at you. They all are reading 24, 1-A through 1-C on voltage. The amperes are 6 on 1-A, 10 on 1-B, 11 on 1-C, 6 on 2-A, 5 on 2-B, 6 on 2-C. The RCS rings look good.

00 52 28 CC

00 52 36 P Roger.

00 52 48 C Carnarvon, this is Gemini 4. I'm seeing the lights of the town below me.

00 52 53 CC

00 53 00 CC MARK!

00 53 01 P Roger. Got your time hack.

00 58 56 P We had a ring in one of our books come loose. It looks like that would be pretty bad if they all got loose - if they all came out of the card.

00 59 08 P My fingertip lights are right on my first knuckle and it is making a sore spot on my center right finger.

01 10 38 CC Gemini 4, Houston CAP COM standing by.

01 10 51 CC Gemini 4, Houston CAP COM.

01 11 06 CC Gemini 4, Houston CAP COM.

01 11 14 C Go ahead, Houston, Gemini 4.

01 11 16 CC Roger, Gemini 4. Houston CAP COM standing by. I read you slightly garbled.

01 11 22 C This is Gemini 4, Houston.
.....

01 11 27 CC Standing by.

01 14 25 P It has a pretty good tumble rate. I'll try to time it here.

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01 14 37 P Makes about one complete revolution in about 8 seconds. It's tumbling end over end. It looks like now we're out a little further than we were before. We've slipped out a little bit. I'd estimate it's out about a mile and a half or maybe a little more. It was really quite a view when we first saw it down there. It looked like almost one of the artist's conceptions. It was so vividly clear.

01 20 58 P Right now, we're in nose-to-the-ground type attitude, such that I don't believe the ground stations are able to read us. We have heard several calls cut in and out for us. We're going to stay in this attitude though for a while to keep the booster in sight. It doesn't appear that we're making too much progress in closing with the booster right now. It looks like it's staying out about the same distance as it was before. During the night sight when the booster was below us, it appeared that there was almost a sky full of stars. There was so much of the venting coming off the booster and into the sky. In fact, I commented on it that they looked like they were stars. When you look closely at the booster at that time, you could see the fuel -- actually the white vapors coming out of the aft end of the booster, and I guess that was spreading the little fireflies all around. It was to such an extent though, it covered the whole visible area in front of us.

GUAYMAS

01 27 57 P Hello, Guaymas. This is Gemini 4.

01 27 59 CC Gemini 4, Guaymas CAP COM.

01 28 00 P Roger, Guaymas. We still have the booster. We're out quite a ways from it now, and it's taking a little more fuel than we had anticipated. We've got 61 in the fore and aft window in the aft direction, 37 left and 36 up at the present time. We appear right now to be just about holding our own with it. Of course, we should as we progress here. We should start to close with it, but it's out further than we had hoped to let it get right now.

01 28 24 CC Roger, I copy.

01 28 25 C Is there any way of giving me a quick check on what my orbit is? This thing is way below me.

[REDACTED]

01 28 31 CC Say again.

01 28 32 C I said the booster is way below me. Could you tell me my present orbit? As soon as possible.

01 28 43 CC Roger, we're working on it.

01 28 50 CC Gemini 4, we'll update you with the orbit calculations some time after the pass over the States.

01 28 56 P Roger, I understand. And be advised our cabin pressure seems to be holding just a hair below 5. It stabilized down initially at 5.5, decreased to 5.25, and then went back up to 5.5, and it's now down a little below 5.

01 29 15 CC Roger. We copy.

01 29 16 P All right, you might get a confirmation for me on that on the ground.

01 29 18 CC Roger. We're working on it. Put your Quantity Read Switch to READ.

01 29 23 P Roger. It's going to READ.

01 29 34 C Guaymas, this is Gemini 4. We're going to have to get a resolution right away whether you want me to really make a major effort to close this last thing or to save fuel.

01 29 44 C Guaymas, do you read Gemini 4?

01 29 46 CC Roger, we copy. We suggest you stand by. We want to save the fuel.

01 29 51 C Okay. I guess it probably expended about 100 ft/sec.

01 29 56 CC You expended 100 ft/sec?

01 30 01 C Yes, that's just a rough guess.

01 30 02 CC Roger. We're finished with the Quantity Read, Gemini 4.

01 30 12 C Roger.

01 30 15 CC Place the Quantity Read Switch to --

01 30 16 C It's off.

01 30 51 CC Gemini 4, Guaymas CAP COM. Flight advises they like to save the fuel. You'll be advised over the Cape.

01 31 01 C Well, I just can't wait till I get to the Cape. I guess we're just going to have to watch it go away. I've retrograded enough to help bring me down but I don't want to get down to wherever it's going.

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01 31 11 CC Roger.

01 31 13 CC Okay. I guess we'll scrub it.

01 31 16 C Okay. Can you give me a tag on my orbit as quick as you can?

01 31 18 CC We're working on it.

01 33 00 CC Gemini 4, Houston CAP COM.

01 33 02 C Go ahead Houston, Gemini 4.

01 33 04 CC Jim, we've estimated you've used about 50 percent of your OAMS capability at this time.

01 33 10 C Roger. I think we ought to knock it off, Gus. It keeps falling, it's probably three or four miles away, and we just can't close on it.

01 33 16 CC Right, knock off. No more rendezvous with the booster.

01 33 20 C Okay. Roger.

01 33 22 CC Okay. We're giving you a GO for your EVA at this time.

01 33 25 C Okay. I would like to know what kind of an orbit I'm in now.

01 33 30 CC We're working on it, but you may not get it until we get to Canary.

01 33 34 C Okay.

01 33 36 CC Okay. I want to give you your 3-1, 3-4, 4-4 times so tell me when you're ready to copy.

01 33 44 C Stand by 1.

01 33 45 CC Roger.

01 33 48 C Okay. Be advised I'm going to let the booster go and not track it anymore. I'm going to align the platform and start conserving fuel.

01 34 01 P Go ahead. This is Gemini 4.

01 34 05 P Gemini 4 is ready to copy.

01 34 30 CC Gemini 4, Houston.

01 34 35 P Go ahead Houston. Gemini 4 is ready to copy.

01 34 37 CC Roger. 3-1: 171. 3+42. 18 19 03. 2+23. 8+42. Do you want to read those back to me?

01 35 01 P Roger. 3-1: 171. 3+42. 18 19 03. 2+23. 8+42.

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01 35 10 CC Roger. 3-4. Tell me when you're ready.
01 35 16 P Ready to go. Just keep shooting.
01 35 18 CC 120. 2+36. 19+34. 3+41. 9+47.
01 35 33 P Roger. 3-4 is 120. 2+36. 19 34 39. 3+41. 8+47.
01 35 42 CC Roger. 4-4: 134. 2+55. 21 08 03. 2+47. 8+30.
01 36 00 P Roger. 4-4 is 134. 2+55. 21 08 09. 2+46. 8+30.
01 36 09 CC Negative on the GMTRC. That is 21 08 03.
01 36 17 P Roger. 21 08 03.
01 36 20 CC Roger. All the rest is correct.
01 36 23 CC I have your onboard map update.
01 36 27 P Roger.
01 36 30 CC Ascending node 157 West. G.m.t. of ascending node is 16:34.
01 36 41 P Roger, I understand. Ascending node 157 West; G.m.t. 16:34.
01 36 47 CC Roger. Could you give me some idea of what your attitudes were over Carnarvon and Canton?
01 36 52 P Roger. We were nose-down tracking the booster and I'm afraid that our attitudes were not so that we could read with good reception on those stations.
01 37 05 CC Roger.
01 37 06 P They read us to some extent. Did they get the blood pressure?
01 37 11 CC They didn't get a very good one, but you're going to give another one around here some place, aren't you?
01 37 15 P Roger. Be advised the gun is out and stowed and assembled and we've got out cameras and we'll be going after the equipment.
01 37 22 CC Roger.

BERMUDA

01 38 15 CC Gemini 4, Houston.
01 38 17 C Go ahead Houston, Gemini 4.
01 38 20 CC Would you go to PRELAUNCH on your computer. You might give me your IVI readouts before you do.
[REDACTED]

01 38 24 C Roger. They were 20 aft and 76 up.

01 38 31 CC Roger. Are you in PRELAUNCH now?

01 38 32 C Roger. In PRELAUNCH now.

01 38 39 C I'm alining the platform.

01 38 40 CC Roger.

01 39 10 CC Gemini, we estimate you still have about 200 feet ΔV left.

01 39 16 C Roger. That's what I've got.

01 39 17 CC Roger.

01 39 27 C CAP COM. Can you give us a G.m.t. time hack? I missed it before.

01 39 33 CC Roger. I'll give you a G.m.t. at 16 56 00.

01 39 38 P Roger.

01 39 55 P CAP COM. I'd like a hack at 16 56 .

01 40 01 CC Roger. It will be 3 more seconds.

01 40 05 CC MARK!

01 40 07 CC That was 16 56 04.

01 40 10 P Roger.

01 40 11 CC We have a new hack on your orbit. It's 89.5 over 158.6.

01 40 19 C Roger.

01 40 58 CC Can you go to READ momentarily?

01 41 01 C We're READ. Roger.

01 41 03 CC Roger.

01 42 15 C Houston CAP COM, Gemini 4.

01 42 18 CC Gemini 4, go ahead.

01 42 20 C Roger. Do you want me to keep my platform and computer up?

01 42 26 CC Turn off your READ switch now if you're reading.

01 42 30 C Okay. I understand you got the reading. Would you advise me on the computer and IMU?

01 42 38 C I see no reason for it.

01 42 41 CC Keep your platform powered up, Jimmy boy.

01 42 43 C Okay.

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01 42 58 CC Hey, Jim. We estimate you have 207 left in your OAMS.

01 43 02 C Roger.

01 43 07 CC Okay. We'd like to have - are you still reading?

01 43 10 C Roger. Still reading you.

01 43 11 CC We'd like to get a blood pressure on Ed over the Canaries.

01 43 15 C He's unstowing stuff right now so you may have to wait a second.

01 43 20 CC Okay. We want it over the Canaries. You got a little time yet.

01 43 26 C Roger. We'll be over there at 1:49, right?

01 43 39 CC Might be there a little sooner than that, I think.

01 43 41 C Okay.

01 43 47 C What was my G.m.t. at lift-off, CAP COM?

01 43 53 CC G.m.t. at lift-off was 15 15 59.

01 43 59 C Roger.

01 44 03 CC Have you checked your cabin seal?

01 44 11 C Roger. Our cabin is holding at about 4.9. What else do you want to check?

01 44 17 CC Check your water seal.

01 44 19 C Water seal. Roger.

CANARY ISLANDS

01 49 26 CC Gemini 4, Canary CAP COM.

01 49 28 C Go ahead Canary, Gemini 4.

01 49 30 CC Give me your Read Switch ON - correction, your Quantity Switch to READ for 10 seconds.

01 49 35 C Quantity Switch is in READ.

01 49 37 CC Roger. We have your secondary Pump B on. Have you turned it on?

01 49 44 C Roger. We have. Ed's trying to get the stuff out It's coming off.

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01 50 03 CC Inflate the - - have the Pilot inflate his blood pressure cuff.

01 50 10 C Can you stand by one, please.

01 50 13 CC Roger.

01 50 29 CC Cryo gage switch OFF.

01 50 33 C It's OFF.

01 50 41 CC Flight advises if you're too busy we'll disregard the blood pressure.

01 50 45 C I wish you would.

01 51 50 CC Gemini 4, Canary CAP COM. Request you turn your computer OFF, leave the platform powered up.

01 51 56 C Roger ... computer's OFF at this time.

01 53 36 CC Gemini 4, Canary CAP COM. Is your water seal OPEN?

01 53 42 C Gemini 4. Negative. Our water seal is not OPEN.

01 53 44 CC Roger.

01 54 03 CC Gemini 4, Canary CAP COM. Your Water Seal Valve is to be OPEN when you start your pressurization and repress.

01 54 15 C You want the Water Seal Valve OPEN when we start the pressurization. Is that correct?

01 54 20 CC Roger. When you start pressurization and the repress.

01 54 24 C Roger.

01 54 32 C Be advised we got the cable out.

01 54 34 CC Say again.

01 54 36 C We just got the cable out!

01 54 42 P It was a wrestling match, but I won.

01 56 05 P Be advised that White had his left glove off for stowage purposes. I've had it off for approximately 15 minutes. This is the standard face-plate OPEN position.

KANO

01 57 28 C Go ahead, Kano.

01 57 31 C Kano, Gemini 4 here. Go ahead.

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01 57 36 CC Gemini 4, this is Houston CAP COM.
01 57 39 C Kano, Gemini 4.
01 57 41 CC Gemini 4, Houston CAP COM.
01 57 44 CC Gemini 4, this is Kano.
01 57 46 C Roger, Kano, Gemini 4. I read you loud and clear.
How me?
01 57 53 CC Gemini 4, how do you read Houston?
01 57 56 C I read -- I read Houston loud and clear.
01 58 10 C Houston, Gemini 4. How do you read me?
01 58 12 CC Gemini 4, Houston CAP COM. Over.
01 58 42 CC Gemini 4, Houston CAP COM. Over.
01 58 49 CC Gemini 4, Houston CAP COM. Over.
01 58 59 CC Gemini 4, Houston CAP COM. Over.
01 59 17 CC Gemini 4, Houston CAP COM. Over
01 59 28 CC Gemini 4, Houston CAP COM. Over.
01 59 41 CC Gemini 4, Houston CAP COM. Over.
01 59 56 CC Gemini 4, Houston CAP COM. Over.
01 59 58 C Houston, Gemini 4. How do you read?
02 00 00 CC I read you loud and clear, Jim. For your attitudes
for EVA go ahead with the same attitudes you had
planned. That's BEF and 180° in roll. That should
be the best for photographic purposes.
02 00 14 C Roger.
02 00 16 CC And to get pictures of the spacecraft, your best bet
would be to move out forward.
02 00 22 C Say again.
02 00 24 CC Your best sun angle for getting a picture of the
spacecraft would be to move out forward from the
spacecraft.
02 00 30 C Roger. He'll move out forward and we'll be BEF up-
side down.
02 00 34 CC Roger.
02 00 40 C Boy, is it crowded in here, Gus.
02 00 42 CC I'll bet.
02 00 54 CC Hey, Jim.

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02 00 59 CC Jim, this is Houston.

02 01 05 CC Gemini 4, Houston.

02 01 31 CC Gemini 4, this is Houston.

02 01 47 CC Gemini 4, this is Houston.

02 01 50 C Go ahead, Houston. This is Gemini 4.

02 01 54 CC Hey, Jim. You don't have to go upside down if you don't want to. You can go to whatever position is best for you.

02 02 02 CC We have no constraint on your attitude.

02 02 18 CC Gemini 4, Houston.

02 03 45 P At this time we are passing over quite a series of thunderstorm cells, off at our ... Can you see it out there? ... it should be about your 1 o'clock

02 04 37 C No, I can't see it. Maybe

02 04 46 P Oh, those must be fireflies again! Are you in the light over there?

02 04 50 C Yes, I'm in the light.

02 04 51 P How does that happen? I'm in night over here.

02 04 55 C We're going sideways.

02 04 57 C Actually, we're going around to blunt-end-forward.

02 05 00 P All right. A very interesting thing - Jim's got full daylight out his window, and I have full night out of mine. We're gradually yawing around to blunt-end-forward, and it looks like the reflection of the sun on these fireflies causes them to glow very brightly. That was the type of stars that we saw on our first dark side.

02 05 29 P It seems very strange for me to look out Jim's side and see daylight and look out my side and it's just pitch black.

02 07 59 P We've got an object out in front of us. It's not flashing like it's the booster. It appears that it's that type of an object unless it's picking up some glow from the sun. It appears a very bright, bright object.

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02 08 30 P We still have the booster at ... it was the booster. I can see the lights flashing on it now. It's just passing on the horizon. Just as it goes to darkness, the reflection of the sun on the booster causes a very bright image. That's the object I had seen earlier. It seems like we're still in fair close proximity of the booster. It looks like it's out in the neighborhood of 2 or 3 miles.

CARNARVON

02 24 22 CC Gemini 4, Carnarvon CAP COM.

02 24 24 C Go ahead, Carnarvon. Gemini 4.

02 24 26 CC Roger. Will you give me a - - correction, will you start pumping up your blood pressure. I don't have any T/M as yet. Are you in real time in that position?

02 24 34 C Stand by.

02 24 38 C Negative. We're in COMMAND. Let me give you a real-time hack position.

02 24 42 CC Roger.

02 24 47 C Ed is off the comm. right now. He's trying to get his umbilical hooked up.

02 24 50 CC Okay. We need a blood pressure immediately from the Command Pilot.

02 24 57 C Well, stand by one. Listen, you might advise Flight by way of land lines that we're running late on this thing. There's a lot to do and we're having trouble keeping track of all this stuff.

02 25 09 CC Okay.

02 25 12 C I'll get the blood pressure as soon as I can get around to it.

02 25 33 CC Give me the switch position on your C-band beacon.

02 25 37 C Roger. It's COMMAND.

02 25 40 C Do you want it back on CONTINUOUS?

02 25 42 CC Affirmative. Back on CONTINUOUS.

02 25 45 C Do you want them both on or just the reentry one?

02 25 48 C Just the capsule.

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21

02 25 51 C Okay. The adapters on. As soon as I get the blood pressure I'll give you a call.

02 25 56 CC Okay.

02 26 35 CC Full-scale on your blood pressure.

02 26 48 CC Can give the Quantity Read Switch for about 10 seconds?

02 26 50 C Roger. I don't think you got a good blood pressure. The bulb popped off.

02 26 53 CC Okay.

02 27 10 CC Gemini 4, you are GO for EVA and decompression. Disregard the blood pressure unless you've got a few minutes and then try and get it for us. We'd appreciate it.

02 27 17 C We don't have any time at all!! We're really pressed here!

02 27 21 CC Okay.

02 27 29 CC Okay. After your first repressurization when you're about 12 to 15 minutes, we want you to go to BYPASS and return to FLOW after you repressurize again.

02 27 37 C All right. You want us to go to BYPASS before we go to repressurize. Right?

02 27 41 CC That'll be after your first repressurization.

02 27 45 C Say again.

02 27 47 CC Okay. Between your first and second repressurization, in that wait period, we want you to put your radiator to BYPASS and then to FLOW after you repressurize the second time.

02 27 55 C Roger.

02 28 28 CC Okay. We're done with your Quantity Read.

02 28 30 C Roger.

02 28 44 CC Okay. We're not going to say anything to you on the ground. If you need anything we'll wait.

02 28 46 C Okay. Listen, has Houston been advised yet that we're running a little late and we might not be ready at Hawaii.

02 28 55 CC Okay.

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02 29 09 CC Okay. Houston advised that if you are unable to make it, take your evaluation and we'll pick it up on the next pass.

02 29 16 C Roger. Understand that.

02 29 18 CC All right.

02 29 21 C That's what we want to get clear.

02 29 23 CC Roger.

02 29 37 CC Okay. You don't have to acknowledge this - you're in a 89.2 by 155 orbit and it's a 4.8 day lifetime.

02 29 41 C Roger.

02 29 52 CC Turn your Right Secondary O₂ OPEN, your Left Secondary O₂ CLOSED.

02 30 07 CC Houston advises you can use any attitude you want for the Extravehicular Activity.

02 33 52 P There was no velcro put on the outdoor 16-mm camera. We sure could have used it.

02 44 21 CC Gemini 4, Houston CAP COM.

02 44 34 CC Gemini 4, Houston CAP COM.

02 44 43 CC Gemini 4, Houston CAP COM.

02 44 53 CC Gemini 4, Houston CAP COM.

02 45 10 CC Gemini 4, Houston CAP COM.

02 45 19 CC Gemini 4, Houston CAP COM.

02 45 35 CC Gemini 4, Houston CAP COM.

02 45 43 CC Gemini 4, Houston CAP COM.

02 46 00 CC Gemini 4, Houston CAP COM.

02 46 16 CC Gemini 4, this is Canton COM TECH. Do you read?

02 46 33 CC Gemini 4, this is Canton COM TECH. Do you read?

02 46 39 P Go ahead, Canton. Gemini 4.

02 46 41 CC Gemini 4, this is Canton. Stand by for Houston.

02 46 46 CC Gemini 4, Houston CAP COM. Do you read?

02 47 10 CC Gemini 4, this is Canton COM TECH.

02 47 17 P Gemini 4, go ahead.

02 47 19 CC Roger. Houston asks your status and asks if there's any change in your Flight Plan.

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02 47 23 P There is no change and we're GO on EVA. We have the ... cameras, the gun, all the equipment assembled, we're completing the final suit ... checks, and I believe we'll be ready to go.

02 47 37 CC Roger.

02 50 28 CC Gemini 4, Hawaii CAP COM.

02 50 36 CC Gemini 4, Hawaii CAP COM. Do you copy?

02 50 38 C Roger, Hawaii. Gemini 4. I'm reading you loud and clear.

02 50 40 CC Roger. What is your status?

02 50 42 C Stand by 1.

HAWAII

02 50 52 C Hawaii, Gemini 4.

02 50 53 CC Go ahead, Gemini 4.

02 50 54 C Next pass around. I don't think we want to try it.

02 50 56 CC Roger. Understand - next pass around.

02 51 02 CC Roger. Gemini 4. We're happy with that.

02 51 33 CC Gemini 4, Hawaii CAP COM.

02 51 36 C Stand by one.

02 51 39 C Okay, go ahead Hawaii.

02 51 41 CC Roger. Flight advises go back on normal suit circuit until next rev. Then go back over Carnarvon.

02 51 50 C Roger. That's what we're doing right now. We just couldn't quite hack it.

02 51 52 CC Roger. Understand.

02 53 47 CC Gemini 4, Hawaii CAP COM. Standing by.

02 53 50 C Roger. We're getting back into sort of a semi-normal configuration here. Anything you need?

02 53 57 CC We have nothing for you. I will check with Houston.

02 54 00 C Roger.

02 54 23 CC Gemini 4, Hawaii.

02 54 25 C Go Hawaii, Gemini 4.

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02 54 26 CC Be advised you'll probably bring up your computer over Texas and they will give you a 4-4 load.

02 54 33 C Okay. Very good.

02 54 35 CC That's all we have for you.

02 54 37 C Thank you. We'll talk to you in about an hour and a half.

02 54 41 CC Roger. Hawaii out.

02 57 05 C Jim McDivitt. Right now it's about T+3 hours. When we came off the booster at SECO, we had rates of around half a degree a second. I tried to damp them out and finally came off around SECO + 30 seconds. It seemed that as we came off we might have come off with some other rates. What do you think, Ed?

02 57 36 P Yes, we did. I wasn't watching as we came off, but it felt like we did come off.

02 57 41 C Yes, at spacecraft separation. It seems to me we came off with some rates, the direction of which I couldn't really tell, but ...

02 57 48 P Felt like we went this way to me.

02 57 51 C Yes.

02 57 52 P We didn't get a linear type forward separation.

02 57 56 C Yes.

02 57 58 C As we got turned around, we came right on around, and found ourselves about 300 or 400 feet from the booster. I guess that was about right, wouldn't you say?

02 58 08 P Yes.

02 58 10 C I thrust toward the booster about 5 ft/sec. My separation burn was around the neighborhood of 6 or 7 seconds. I thrust at the booster for about 5 or 6 ft/sec and then watched it as we were separating from it. I thrust about another 3 ft/sec. Looked like we started closing - we started closing from off to the side and at about 600 to 700 feet, I guess. If you think any of these numbers are wrong just call out.

02 59 50 P No.

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02 59 53 C And then it looked like all apparent motion had stopped and we were probably closing. So I turned the spacecraft around and made an attempt to aline the platform. In the meantime, the booster started dropping down below us at a rather obvious rate. So I gave up trying to aline the platform to line up and thrust down toward the booster, and I retro-fired slightly to slow down with it. Once again, it looked like our rates were stopped. But by now we had drifted out to about 1000 feet or so. We then tracked the booster across Africa pointing down at it all the way. We got in to sunset pretty quick and at sunset I guess we were at about 1200 feet, Ed?

02 59 59 CC Gemini 4, Houston CAP COM.

03 00 00 P Yes, we were in fairly close.

03 00 02 C We were at 1200 feet and closing slightly.

03 00 09 CC Gemini 4, Houston CAP COM.

03 00 09 P I'll get them.

03 00 10 C Go ahead, Houston. Gemini 4.

03 00 15 C As we went into nighttime we were

03 00 17 C Go ahead, Houston. Gemini 4.

03 00 19 CC Roger. Jim, you're going to be live as you make your pass across the States this time.

(Watch Timed)

03 00 24 C Okay. Anything in particular you wanted me to say?

03 00 31 CC Suit yourself.

03 00 33 C Okay.

03 00 39 CC Hey, Jim. Could you give me an idea of how much you - what was the ratio of your thruster use, how much you used your aft firing, and how much you used your forward firing thrusters back early in the Flight Plan?

03 00 50 C Yes. I'll give you percentage. I used the top thrusters down for about 10 or 15 seconds, I guess. I used the aft firing ones almost the entire time aside from that.

03 01 13 CC Roger. I copy. Ten or 15 seconds on the down, almost all the rest of it on the aft.

[REDACTED]

03 01 18 C Eight or 10 seconds on the forward firing ones, but that's about all.

03 01 21 CC Roger.

(End of Watch Timing)

03 01 29 C I might add that we have seen the booster. It continues to circle around with us, but it's just too far off to go get.

03 01 33 CC Roger. Hey, would you check your ACQ aid circuit breaker and make sure it's ON.

03 01 37 C Make sure that it's OFF?

03 01 38 CC It's ON.

03 01 41 C Okay. It's OFF at this time. It's coming back ON.

03 01 44 CC Okay. It's coming ON.

03 01 47 C Negative. It's coming ON.

03 01 49 CC Roger. ON.

03 01 51 C Righto.

03 02 09 CC Hey, Jim, you do have your computer ON, don't you?

03 02 13 C Negative. I don't have it ON. Do you want it ON at this time?

03 02 15 CC Roger. Turn it ON. We're going to give you a 4-4 time.

03 02 18 C Okay. I thought we were going to get it later. I'll turn it ON at this time.

03 02 23 CC At PRELAUNCH Mode.

03 02 26 C Roger. PRELAUNCH.

03 02 43 CC Computer light is on. We're ready.

03 02 46 CC Say again, Jim.

03 02 47 C I say, my computer light is on. We're ready.

03 02 49 CC Roger.

03 03 04 CC I think you did a smart thing back there.

03 03 08 C Yes, Gus. It would have been a short flight if we'd kept chasing that mother around.

03 03 12 CC Yes. Sounds like you've been awfully busy the first couple of orbits, you know.

[REDACTED]

[REDACTED]

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27

03 03 17 C It would have been impossible. We would never have done the EVA at all.

03 03 29 C We're finally getting a change to look out here, Gus, and it's really nice.

03 04 16 CC Hey, Jim. Jim, this is Houston. Hey, Gemini 4, Houston CAP COM.

03 04 24 C Go ahead, Houston. Gemini 4.

03 04 26 CC How about describing the way the cockpit is laid out now, with all of your gear out?

03 04 35 C Okay. Well, we've got to the get-out position here, and when we finally called it quits it was obvious that we weren't going to make it at that time without really rushing. I didn't want to do that.

03 04 44 CC Roger.

03 04 46 C Ed has most of the equipment on him right now. I've got the gun and the camera and the hatch fitting, the fitting to tie the two suit hoses together. Ed has all the other paraphernalia on him right now, but he's on the suit circuit. He's got the Reprass valve OFF and we're just about all set to go. I think when we get about over Africa we're going to go through the checklist again, and when we get to Carnarvon we'll be all set.

03 05 22 CC Roger. Have you taken any pictures yet?

03 05 25 C No. As a matter of fact, we really haven't had time to do much.

03 05 28 CC You haven't had any time yet, have you?

03 05 30 C It's a nice spacecraft though, Gus.

03 05 35 CC Good. Do you have the Shut-off valve on the chest-pack CLOSED?

03 05 40 C Roger. It is.

03 05 41 CC Okay.

03 05 44 C Okay, did we get an update then?

03 05 57 CC Roger. It got in okay.

03 06 21 CC Gemini 4. Gemini 4, Houston.

03 06 35 CC Gemini 4, Houston.

03 06 45 CC Gemini 4, Houston.

03 07 10 CC Gemini 4, Houston CAP COM.

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[REDACTED]

03 07 13 C Go ahead, Houston. Gemini 4. Do you read now?

03 07 15 CC Roger, I lost you there for a minute. Say, you never did start to decompress, did you?

03 07 22 C Say again.

03 07 24 CC Did you ever start decompressing?

03 07 26 C Negative. We never started decompressing.

03 07 28 CC Roger, understand.

03 07 48 C Houston CAP COM, this is Gemini 4. Looks like we're over Texas now, huh?

03 07 53 CC You say you're coming right over Big T?

03 07 56 C Roger

03 07 58 CC See any of it?

03 07 59 C Sure can. We're coming over the Gulf right now.

03 08 05 CC Right over Gulf, huh? Has your weather been good around the orbit?

03 08 10 C Frankly, we haven't really had time to look out too much

03 08 17 CC Roger. Can you still see the booster?

03 08 19 C I don't even know where it is right now, Gus.

03 08 21 CC Roger.

03 08 23 C We saw it just as we went into darkness. We stayed with it all through the darkness

03 08 31 CC You're getting awfully garbled.

03 08 33 C Roger. I say again. We saw it when we were in the darkness, but we haven't seen it since we came back out into the light.

03 08 39 CC Roger, understand. You saw it on the dark side.

03 09 08 CC Gemini 4, Houston CAP COM.

03 09 10 C Go ahead, Houston. Gemini 4.

03 09 11 CC Roger. We just switched remote. Is Ed still there?

03 09 16 C Yes, he doesn't like to talk, I guess.

03 09 21 P I'm sitting here enjoying the view.

03 09 24 CC Roger. Do you get pretty heated up getting all that gear on?

03 09 27 P I got ... we got pretty warm.

[REDACTED]

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03 09 30 CC How do you feel now?

03 09 31 P Fine.

03 09 32 CC Good.

03 09 51 CC You guys had any water to drink yet?

03 09 53 C Negative.

03 10 04 CC Hey, Jim, we figure the booster ought to be about 32 miles ahead of you and 5 miles below you at this time.

03 10 10 C Thirty-two ahead and 5 below.

03 10 12 CC Roger.

03 10 29 P We've got quite a good view of the whole state of Florida, and we're passing over it now.

03 10 34 CC You've got Florida in sight, huh?

03 10 35 P We can see it from the top to the bottom.

03 10 39 CC Very good.

03 10 43 P In fact, we're looking right down at the Cape now. You can see the launch complexes down there. It's quite clear.

03 11 06 CC Hey, Jim. Gemini 4.

03 11 11 C Go ahead.

03 11 14 CC We'd like for you to turn your cabin heat exchanger ON until you get ready to decompress. And the fan.

03 11 20 C Roger. We're not getting hot if that's what you're worried about.

03 11 26 CC Cabin temperature is getting up a little.

03 11 28 C Okay.

03 11 44 C Houston CAP COM, Gemini 4.

03 12 46 CC Go ahead.

03 12 51 CC This is Houston. Go ahead.

03 12 52 C Roger. How about turning the computer OFF again?

03 12 57 CC Affirmative, turn it OFF. Don't forget to drink some water now.

03 13 06 C Yes. Can we turn the computer OFF?

03 13 08 CC Roger. Turn the computer OFF.

03 13 28 C Houston. Gemini 4, do you read?

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03 13 30 CC Roger, we read you. Go ahead.

03 13 32 C Roger. How about turning the computer OFF?

03 13 34 CC Roger, turn OFF the computer.

03 13 37 C Okay!

03 15 54 CC Gemini 4, Houston CAP COM.

03 15 55 C Go ahead, Houston. Gemini 4.

03 15 56 CC Hey, your cabin temperature came down 10° since you turned your heat exchanger ON.

03 16 02 C Roger.

03 16 29 CC Gemini 4, Houston.

03 16 33 C Go ahead, Houston. Gemini 4.

03 16 34 CC As you come over Ascension I want to try to give you a check there. The air-ground remote hasn't worked too well today but we sure would like to get that one up.

03 16 41 C Roger, we'll be waiting.

03 16 44 CC Roger.

03 16 45 C Would you advise, we've both had a drink, and I had 10 swallows.

03 16 51 CC Roger.

03 27 42 P We've got another sighting on the booster. It looks like it's just about horizontal with us and right straight out in front of ut.

03 27 48 C Small-end-forward.

03 27 49 P We are going small-end-forward and it looks like it's very close to our orbit.

03 27 58 C And it's at about 3:28 elapsed time.

03 29 48 P The lights on the booster are still blinking. I can see them at this time.

03 34 00 C We're just at 3+34 right now. Just going into darkness. The sunlight has been shining on the nose of the spacecraft with small-end-forward, just about. Actually, we're 30° left of being straight ahead, small-end-forward. And the way the sun was shining on the edge of the booster spacecraft was causing a reflection, just like someone had a mirror there and was shining it straight ahead.

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31

03 34 34 P Yes, that's what that last time, Jim.

03 34 41 C A bunch of thunderstorms out on the horizon.

03 34 51 C Okay. We get to Carnarvon at 3:58. That's when we're going to get our GO. We start our depressurization right there. What we're going to do is that we're going to open the Repress, tighten your helmet,

03 35 17 P We've got one thing left to do in the steps. We've got to take these off, Jim.

03 35 20 C Take what off?

03 35 21 P The suit pressure lines and put them on the interconnect.

03 35 25 C Yes, that's not yet though

03 35 28 P Do you have the interconnect over there handy?

03 35 29 C Yes, I've got it right here.

03 35 30 P Okay.

03 35 31 C This is in the egress.

03 35 31 P All right.

03 35 32 C When we start at Carnarvon.

03 35 34 C Open the Repress Valve. Okay, this is what we're going to do. Helmet tied on?

03 35 38 P Yes.

03 35 40 C Right Suit Flow Control OFF?

03 35 43 P Right.

03 35 46 C Disconnect inlet and outlet ECS hoses. Remove your interconnect.

03 36 14 C Okay, let's see. Remove the interconnect. Interconnect the two ECS hoses ... by your elbow.

03 36 24 P Okay.

03 36 24 C Pack Primary O₂ OPEN.

03 36 28 P Roger.

03 36 29 C Not yet.

03 36 30 P No.

03 36 33 C EVA Emergency Shut off OPEN.

03 36 36 P Roger. Check the FLOW.

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03 36 37 C Check the emergency FLOW and then back to CLOSED.
03 36 38 P Roger.
03 36 40 C Recheck your suit, your pack, and tether.
03 36 42 P Roger.
03 36 43 C Recheck your face-plate closed and locked. Helmet locked, gloves on, inlet-outlet "Y", and ECS hoses free. And then I'll have a Command Pilot Suit Check, which I've already done on to check the flow. Hatch lock OPEN. Then you've got your other things to check. When we actually start the Depressurization Mode, Cabin Vent valve go to 2 psi, then we close the vent valve. Then we install both blood pressure pump plugs, which I don't seem to be able to find.
03 38 05 C Gee, I don't even have one on my suit.
03 38 07 P I don't have one either, Jim.
03 38 15 C Swell.
03 38 18 P Aw, baloney.
03 38 23 P I sure don't see one.
03 38 30 C Nope, I don't have one.
03 38 31 P I don't either, unless it's up under my cover.
03 38 42 C No, you don't have one, Ed.
03 38 45 P The hole's not big enough but still you ought to have one.
03 38 50 C Right.
03 39 00 P Neither of our suits have the blood pressure cuff - blood pressure plug
03 39 07 P And we just had a very pretty moonset.
03 39 00 C Just a casual comment here. We looked out and thought we saw the horizon. It turned out, it was obviously air glow. We could see the stars well below its edge.
03 49 10 C We'll talk about this some more later when we get more time.

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35

03 50 07 P We noticed the old familiar pulsing in the suits when we had the RECIRC closed all the way down and our dampers that time were open full in both suits. It was the same type of a pulsation that occurred in altitude chamber and which was, I believe, duplicated in the testing.

02 50 33 P Cabin pressure seems to hold around 4.8 to 5.0, right on the bottom. Also, our Left Secondary Oxygen is pretty high, looks like it's up around 5400. Been that way ever since we started.

CARNARVON

03 57 34 CC Gemini 4, Carnarvon CAP COM.

03 57 36 C Go ahead, Carnarvon. Gemini 4. How do you read?

03 57 38 CC Loud and clear. Will you turn you cabin fan OFF, heat exchanger full warm?

03 57 44 C Carnarvon, Gemini 4.

03 57 46 CC Gemini 4, Carnarvon CAP COM.

03 57 50 CC Gemini 4, Carnarvon CAP COM. Over.

03 57 59 C Hello, Carnarvon. Hello, Carnarvon. Gemini 4.

03 58 01 CC Gemini 4, Carnarvon CAP COM.

03 58 04 C Roger, Carnarvon. Gemini 4. How do you read?

03 58 07 CC Loud and clear. How me? Over.

03 58 08 C Loud and clear.

03 58 10 CC Roger. Will you turn your cabin fan OFF. Heat exchanger full warm?

03 58 15 C Roger.

03 58 18 CC Roger. We'd like a blood pressure from the Command Pilot.

03 58 30 P The cabin fan does give a noticeable squeal when it's on. I notice now that the fan is off. I notice a definite decrease.

03 58 35 CC What's your status on EVA?

03 58 37 C The status is GO for EVA.

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03 58 39 CC Okay. You're GO for EVA from here. Stand by for decompression - correction, depressurization. Can you give us a blood pressure? On the Command Pilot?

03 58 43 C The status is GO for EVA.

03 58 45 P The cabin appears to be venting at about 5.3. Just heard the vent valve going for Eee Vaa.

03 58 49 C Roger. I'm going to try to give you a blood pressure right now.

03 58 51 CC All right.

03 59 15 CC Okay. Keep coming, it's coming up.

03 59 24 CC You are up to full-scale.

03 59 37 CC Can you give me about 10 seconds on your Quantity Read switch, please?

03 59 57 P Quantity Read is ON.

03 59 58 CC Roger.

04 00 08 P Quantity Read is OFF.

04 00 10 CC Roger.

04 00 16 CC Okay. We got a good blood pressure from you.

04 00 19 CC Your Right Secondary O₂ should be OPEN and your Left Secondary O₂ should be CLOSED.

04 00 26 P That is affirmative. That's the configuration. The left is CLOSED; the right is OPEN.

04 00 31 C We have a GO to start decompression, is that right?.

04 00 34 CC That's affirmative for decompression and a GO for EVA.

04 00 37 C Roger..... call again near Hawaii.

04 00 41 CC Roger. Very good.

04 01 02 CC We'd like for you to turn your Quantity Switch to READ from now on until the end of the EVA.

04 01 07 CC Okay. I got it on.

04 01 10 CC I'll be standing by here on the ground and keep the conversation down.

04 01 13 C Roger.

04 07 21 P Okay.

04 07 24 C Hatch lock OPEN.

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35

04 07 29/ P Hatch locks are OPEN.
04 07 30 C Okay.
04 07 33 C Don your other thermal gloves. I guess you got one of them.
04 07 38 P The thermal gloves didn't work out too bad, Jim.
04 07 42 C Yes. Okay. We're going to vent the cabin now.
04 07 43 P Yes.
04 07 45 C Two psi. Did you get that,El? We're going to close vent valve and we're going to check those blood pressure readings that we have. We're going to check the suits for leaks at 2 psi. Check yours to make sure that suit one. Okay?

04 08 00 P Ready to go.
04 08 09 C Hear the valve?
04 08 10 P Roger.
04 08 12 C Carnarvon, do you still read Gemini 4?
04 08 22 C Are we.....
04 10 45 P Okay.
04 10 48 P I hear it - I'll keep mine...where do you...oh, you want mine? All right, I'm sorry, Jim.

04 10 50 P All right.
04 10 53 C Okay.
04 10 55 P Roger, we're in a vacuum now and the right suit is holding at 4 and the flow is satisfactory. I'm not overly warm.

04 11 02 C Okay. We've got the cabin vent valve open. cabin at zero. Time to unlock the hatch.
04 11 10 P Roger. Time to unlock the hatch.
04 11 12 C
04 11 17 P Well, the thing about it, I've got to do something with the cabin

04 11 21 P Okay.
04 11 24 C What are we going to do with?
04 11 26 P Hold on to it, cause I can't it.
04 11 29 C

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[REDACTED]

04 11 50 C What's the matter? Isn't it working?
04 11 53 P Uh huh.
04 11 55 P work up here.
04 12 02 C unlocked
04 12 05 P Yes, I know they're unlocked.
04 12 07 P I'll look again.
04 19 09 P That's why I had these gloves made this way so I
could take them off.
04 12 12 C Right.
04 12 17 C you're staying up with it, buddy.
04 12 19 P What?
04 12 24 P That's up.
04 12 26 C Say again.
04 12 28 P They're both on UP.
04 12 31 C Okay.
04 12 45 C Now you have
04 12 55 P I know it.
04 13 07 P Three cycles.
04 13 08 C Okay, let me stand by for a minute here and get the
..... controls.
04 13 29 P to LOCK so we can get on it. Okay now, that's
working.
04 13 53 C Take it easy, Ed.
04 14 09 C Woke up?
04 14 11 P Yes, just wait a minute.
04 14 14 C Yes, but listen, don't you Stand by one, Ed.
04 14 18 P Are they doing anything?
C
04 14 19 P Are they moving?
04 14 22 C No, they're not moving a bit.
04 14 24 C Think we're
04 14 32 P Hold these a minute, will you?

[REDACTED]

[REDACTED]

04 14 36 C Just take it easy. If we don't make it this time,
we'll make it next time.

04 14 38 P Roger. Next time around.

04 14 41 C Or tomorrow.

04 14 43 C You can't see too well with that visor on either,
can you?

04 14 56 P They're both on UNLOCK.

04 15 10 C

04 15 17 P Are they moving, Jim?

04 15 19 C Stand by. I can't see

04 15 27 C Negative, it looks like they're not moving at all.

04 15 43 P Looks like that thing isn't moving.

04 15 45 P I'll take it easy a minute.

04 15 48 C Yes, no sweat.

04 16 08 C You know, it's a good thing we can't get it open
and not close.

04 16 10 P Yes.

04 16 15 C Let's not leave it OFF.

04 16 17 P I'm on LOCK now.

04 16 24 C Where're you going?

04 16 33 P This is the first time it's ever failed this way.

04 16 36 C Sure is.

04 16 39 C No it isn't either. It failed that way up at
McDonnell.

04 16 42 P So that it wouldn't move at all?

04 16 43 C Yes.

04 16 45 P So it was just free swiveling.

04 16 48 C Yes, it -- I know what the trouble is. It's a spring
pushing it back.

04 17 00 C I think it will be all right.

04 17 02 C Let me go to MANUAL and

04 17 30 P I got it, Jim.

04 17 31 C Wait a second.

04 17 33 P Okay.

[REDACTED]

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04 17 36 P You got it?
04 17 37 C Yes, I got it.
04 17 39 P All right.
04 17 40 C Okay, now make sure you get that mother back on.
04 17 43 P Back in LOCK.
04 17 44 C All the way?
04 17 45 P Yes.
04 17 48 C Okay. You got it LOCKED, UNLOCKED all the way then?
04 17 50 P Yes, I do, Jim.
04 17 53 P They're all back in LOCK now?
04 17 56 P Okay. I'm going to take it easy now.
04 18 00 C Yes, do that. Now, I want to get the spacecraft right-side up and leave that last
04 18 04 P What a view! By golly. You can see the black sky up above.
04 18 10 C Okay, just a second. Let me get the spacecraft where I want it.
04 18 12 P All right.
04 18 17 P Door's a little harder to move than I thought.
04 18 21 P Yes.
04 18 28 P It sure is clear and crystal smooth.
04 18 33 P Are we on VOX, Jim?
04 18 36 C Something just fell out.
04 18 38 P It was a bolt.
04 18 41 C No, it was a big white thing.
04 18 43 P It's my it's adrift probably, huh?
04 18 44 C What?
04 18 45 P It's my lanyard.
04 18 48 C No, I thought I saw it floating away
04 18 51 C Oh, yes. You can.....
04 19 00 P Okay, my visor's down.
04 19 12 C Okay, take it easy.
04 19 14 P Right.

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04 19 19 C
04 19 35 I I'm going out there to install the cameras, Jim.
04 19 36 C Okay.
04 19 41 P The sun's very bright back this way.
04 19 43 C Is it?
04 19 45 P Yes.
04 19 46 C your visor.
04 19 48 P Got my visor down.
04 19 50 C Your foot.
04 19 52 P Huh?
04 19 55 C You're going to have to watch your foot.
04 19 57 P Okay.
04 20 00 P You see, I have to turn all around to do this, Jim.
04 20 02 C Yes, I know.
04 20 04 C Just move it all over the equipment there.
04 20 05 P All right.
04 20 17 P I can see your thrusters firing.
04 20 24 P We're taking some pictures now.
04 20 36 P Am I clobbering the switches, Jim?
04 20 38 C Yes, you're really all over 'em, Ed.
04 20 41 P Okay. Hand me the umbilical guard.
04 20 45 C Take it easy now. You sound like you're pulsing.
04 20 49 P No, I'm in good shape.
04 20 50 C Listen, hold it. Hold it. Hold it.
04 20 55 P You got it through?
04 20 56 C No, hold on.
04 21 00 P Roger. Got plenty of time. Boy! Oh, boy! Oh, boy!
04 21 02 C Pretty neat, huh?
04 21 03 P Yes, it's something!
04 21 05 C Think we're T/M Here, I got one of your gloves
..... I got both of your gloves.
04 21 09 P Yes, I don't even need them right now.

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04 21 17 C Okay..... the T/M. They're calling back now.

04 21 29 P As 'Ole Leonov' says, I'm doing some work out in space. It isn't very much, but I'm doing something.

04 21 33 C Pretty black out there, isn't it?

04 21 36 P Yes.

04 21 38 P Okay, I turned the camera off, so I would save it.

04 21 47 P Oh, I just knocked it off the mount.

04 21 48 C Did you?

04 21 50 P Yes, I'll go back and get it.

04 21 55 C Tell me. How do you like this glass?

04 21 57 P That's fine.

04 22 02 P You know, I'm kinda glad I got the visor on for the work I'm doing.

04 22 07 C Pretty bright?

04 22 09 P Well, I'm looking right into it.

04 22 17 C Your jiggling around actually moves the spacecraft.

04 22 19 P Does it? I can see it pulsing.

04 22 29 P Okay. I'm going to feed the umbilical out.

04 22 31 C Okay. Be careful you don't trip some of the switches. Let me give it to you.

04 22 37 P Okay. Feed her out slow.

04 22 43 C Okay. I've got

04 22 48 P All right.

04 22 55 C

HAWAII

04 23 03 CC Gemini 4, Hawaii CAP COM.

04 23 14 C Hawaii, do you read Gemini 4?

04 23 17 CC Gemini 4, Hawaii.

04 23 19 C Hello, Hawaii. Hello, Hawaii. Gemini 4. How do you read?

04 23 22 CC Roger. Read you loud and clear. Can you give us a status on your decompression?

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04 23 24 C We're going to put you on RECORD so the whole world can hear this later on.

04 23 26 P All right.

04 23 28 C Hawaii, Gemini 4. Do you read?

04 23 30 C You're on RECORD. We're on CONTINUOUS INTERPHONE-PUSH TO TALK. Still on UHF.

04 23 30 CC Gemini 4, Hawaii CAP COM. Read you loud and clear. How me?

04 23 52 C Very good, Ed. Very good.

04 23 58 CC Gemini 4, Hawaii CAP COM. Do you read?

04 23 59 C Stand by one.

04 24 40 CC Gemini 4, Hawaii CAP COM. Read you loud and clear. What is your status on decompression?

04 24 46 C Hello, Hawaii, Hello, Hawaii. Gemini 4. Do you read?

04 24 51 CC Gemini 4, Hawaii CAP COM. Read you loud and clear. How me?

04 24 54 C Loud and clear. We're on VOX. I guess you aren't getting us on VOX.

04 24 57 CC Roger. We just now received you. What is your status on decompression?

04 25 02 C Got the outside 60-mm camera mounted, and he's getting the gun ready right now.

04 25 09 CC Roger. I understand. Can you give us a reading on emergency O₂ ?

04 25 16 CC Did you copy, Gemini 4?

04 25 18 C Roger. You mean the emergency O₂ in Ed's bottle?

04 25 21 CC Affirmative.

04 25 22 C This one's full and

04 25 25 P It's 34 right now (3400 psi)

04 25 26 C It's 34 right now.

04 25 30 C Say something.

04 25 31 P It's 34 right now. Hasn't changed a step. How do you read?

04 25 36 CC Roger. Read you loud and clear Pilot. How me?

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04 25 36 P Outside the spacecraft, as a matter of fact.

04 25 42 CC Roger. Understand.

04 26 07 C Roger. He has the hatch open. He's standing in the seat.

04 26 11 CC Roger. Understand. Houston will give you a GO or NO GO to exit spacecraft over Guaymas. Did you copy?

04 26 26 CC Gemini 4, Hawaii CAP COM.

04 26 28 C Go ahead, Hawaii, Gemini 4.

04 26 30 CC Roger. Did you copy my last? Houston will give you GO-NO GO to exit spacecraft over Guaymas.

04 26 36 C Roger. Everything looks good here. What do you think?

CC We're happy with it.

04 26 42 CC Everything looks good on the ground, Gemini 4.

04 26 46 C Very good.

04 27 19 C Our ECS is still good. It's reading still 50 percent. Looks like we're not even using any.

04 27 26 CC We concur on the ground.

04 27 31 C When he's moving around out there, he's really rocking the spacecraft around.

04 27 35 CC Roger. Understand.

04 28 11 CC Gemini 4, Hawaii CAP COM.

04 28 13 C Go ahead, Hawaii. Gemini 4.

04 28 14 CC Roger. We just had word from Houston. We're ready to have you get out whenever you're ready. Give us a mark when you egress the spacecraft.

04 28 25 C Okay. We've got our GO now. Is that right?

04 28 26 CC Affirmative.

04 28 27 C Okay.

04 28 39 CC Be sure and give us a mark when he egresses.

04 28 43 C Okay. We're still doing a little work right here.

04 28 45 CC Roger. Understand.

04 29 14 P All right.

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04 29 21 C You're in RECORD and CONTINUOUS INTERPHONE-PUSH TO TALK. I'm on UHF. How are you doing?

04 29 24 P I'm in good shape.

04 29 25 C Okay

04 29 28 CC Gemini 4, Hawaii CAP COM. What is your status now?

04 29 30 C Roger. We're about ready to start getting out. Ed just got one of his gloves back on. He'll put another one on and then he'll be ready to go.

04 29 33 P I'm not going to carry it, Jim. I don't need it.

04 29 38 C You're not going to carry it?

04 29 40 C Okay. We're all set, Ed, right now. Ready to go out slowly.

04 29 41 CC Can you repeat, Gemini 4?

04 29 43 P Yes.

04 29 44 C Listen, do you want me to get the spacecraft in any other attitude or does this look okay?

04 29 48 P Looks okay, Jim.

04 29 50 C Okay. I'll tell you when.

04 29 50 CC Gemini 4, Hawaii CAP COM. Can you repeat your last transmission?

04 29 52 P I'm ready.

04 29 53 C Okay, stand by one. I want to get my timer set. I'll give you a GO in just about 2 minutes - or less.

04 29 59 CC Gemini 4, Hawaii CAP COM. Do you copy?

04 30 00 P I'm going to have to let the camera run out because it's too hard to work.

04 30 02 C Okay, just a second.

04 30 06 P Ready.

04 30 07 C Okay, go ahead.

04 30 11 CC Gemini 4, Hawaii CAP COM. Do you copy?

04 30 19 P Okay. I'm separating from the spacecraft.

04 30 21 C Okay. He's separated from the spacecraft at this time, Hawaii.

04 30 25 C

04 30 26 P Okay. My feet are out.

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04 30 27 C Okay. His feet are out.

04 30 29 P I think I'm dragging a little bit, so I don't want to fire the gun yet.

04 30 33 C

04 30 36 P Okay. I'm out.

04 30 38 C Okay. He's out. He's floating free.

04 30 48 P Okay. I put a little roll in, took it right out.

04 30 50 C Very good.

04 31 00 P Am I in your view, Jimbo?

04 31 02 C Well, you know I can't see

04 31 04 P Don't sweat it. I'll come to you.

04 31 12 C Oops! There goes your glove. Well, we'll just let it go.

04 31 14 P All right.

04 31 19 P Okay. I rolled off and I'm rolling to the right now. Under my own influence. There goes a -- looks like a thermal glove, Jim.

04 31 26 C It is, Ed.

04 31 28 P All right. Now, I've come above the spacecraft and I'm under my own control.

04 31 45 P It really looks funny to see my glove out there, Jim.

04 31 48 C Does it?

04 31 50 P Yes. Okay, I'd better get over. Okay, I'm coming over.

04 32 00 C Okay. Stand by.

04 32 02 P See me yet?

04 32 04 C No, sure don't.

04 32 05 P Huh?

04 32 07 P Oh, there you are. I can spin around now.

04 32 12 C Okay. Just a second. You're right in front, Ed. You look beautiful.

04 32 16 P I feel like a million dollars. All right we'll pitch up and yaw left. I'm coming back to you.

04 32 16 CC Gemini 4, Houston CAP COM.

04 32 24 C Stand by. I get the swizzle stick out of here.

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[REDACTED]

04 32 25 CC Gemini 4, Houston CAP COM.

04 32 31 P Okay. I put in a little bit too much pitch there.

04 32 36 P The gun works real great, Jim.

04 32 38 C Let me get over where I can see you, Ed.

04 32 40 P Take it easy now. You're in a vacuum.

04 32 40 CC Gemini 4, Houston CAP COM.

04 32 42 C Ha! Ha? No, I want to get the spacecraft on the horizon.

04 32 47 P All right.

04 32 50 P Okay. I'll come in and take a look at you now.

04 32 52 C Wait a second. Let me take your picture.

04 32 52 CC Gemini 4, Houston CAP COM.

04 32 55 P Just a minute - just a minute.

04 33 04 P This gun is very good.

04 33 07 C Is it?

04 33 08 CC Gemini 4, Gemini 4, Houston CAP COM.

04 33 09 P Yes. I've got me upside down. Now I see my glove is departing.

04 33 14 CC Gemini 4, Houston CAP COM.

04 33 16 P Okay. Don't fire the thrusters.

04 33 16 C Okay. Don't. I'm going on. Who's calling Gemini 4?

04 33 20 CC Houston CAP COM. Has he eggressed?

04 33 24 C He's out, Gus and it's really nifty. Listen, our VOX doesn't work very well, and I don't seem to read anybody. You will have to relay. The gun works swell. He's been able to maneuver all over - out front, back under the nose, and he's back out again.

04 33 34 CC Say again.

04 33 35 C work very well, but I don't think he can read anybody. So I'll have to relay. The gun works swell. He's been able to maneuver all over - out front, back under the nose, and he's back out again.

04 33 45 CC That's great!

04 33 45 C Ed?

[REDACTED]

[REDACTED]

00 33 46 P Yes.

04 33 48 C Let me try VOX again. Say something.

04 33 52 P Hello, Gus. How do you read, CAP COM?

04 33 56 C Hey, Gus, do you read?

04 33 58 CC I read you now, Ed.

04 34 00 C It's not really working, Ed.

04 34 02 P All right.

04 34 04 C Okay. Listen, I still can't see you out there.

04 34 05 CC It's working. Keep talking.

04 34 07 P All right. I've drifted off to the side. I think we're going to have I'm taking pictures now, Jim.

04 34 11 CC Gemini 4, it's working. Keep talking.

04 34 11 C Okay.

04 34 15 C Make that flag look pretty.

04 34 19 P Yes.

04 34 21 P Okay. I'm right by the stub antenna now.

04 34 24 CC Gemini 4, keep talking. It's working.

04 34 24 C Okay. Let me get some to you, Ed. I ought to be getting some tremendous pictures of you. Let me try again with the Hasselblad.

04 34 30 CC Gemini 4, Houston CAP COM.

04 34 31 P Okay. I think I've exhausted my air now.

04 34 33 C Okay.

04 34 36 C Stay right there.

04 34 40 P I had very good control with it. I just needed more air.

04 34 45 C Okay. Stand by. Let me take a couple of pictures, ole buddy.

04 34 48 P All right.

04 34 52 CC Gemini 4, Houston CAP COM.

04 34 54 C Go ahead, Gus.

04 34 58 CC Tell him to keep talking. We're receiving Ed through your VOX.

[REDACTED]

[REDACTED]

04 35 00 P Are you reading me, CAP COM?

04 35 01 PGus?

04 35 02 C Okay. We're going to VOX now.

04 35 04 C Okay, Ed. They're receiving you.

04 35 07 P Okay.

04 35 09 C Tell them what you think.

04 35 10 P That's right, CAP COM, it's very easy to maneuver with the gun. The only problem I have is that I haven't got enough fuel. I've exhausted the fuel now and I was able to maneuver myself around the front of the spacecraft, back, and maneuver right up to the top of the adapter. Just about came back into Jim's view. The only thing I wish is that I had more. This is the greatest experience I've it's just tremendous! Right now I'm standing on my head, and I'm looking right down, and it looks like we're coming up on the coast of California. I'm going into a slow rotation to the right. There is absolutely no disorientation associated with it.

04 35 52 C One thing about it, when Ed gets out there and starts wiggling around, it sure makes the spacecraft tough to control.

04 36 02 P I feel just about like a commercial.

04 36 03 CC Is he taking pictures?

04 36 11 CC Take some pictures.

04 36 12 P Okay. I'm going to work on getting some pictures, Jim.

04 36 14 C Okay. Get out in front where I can see you again.

04 36 16 P Yes.

04 36 18 C I've only got about three on the Hasselblad.

04 36 20 P Okay.

04 36 22 C Where are you?

04 36 24 P Right out in front now. I don't have the control I had any more without that gun.

04 36 28 C Yes, I noticed that.

04 36 31 P On the tether.

04 36 31 CC You've got about 5 minutes.

[REDACTED]