

ASTP (USA) MC558/1

Time: 08:30 CDT, 169:10 GET

Date: 7/22/75

ACDR Okay, Bo, we're ready with the ole morning report
if you're ready.

CC-H We're ready to copy.

ACDR Okay. AC: Meal A - ate everything plus a tea. Meal
B - everything plus cookies. Meal C - everything except the peas and add
a tea.

CC-H That was minus teas and plus what?

ACDR Minus peas and plus teas.

ACDR Got that?

CC-H Negative. I still didn't get the addition.

ACDR Negative on the peas and positive on the tea.

CC-H Tea! Roger. Go ahead. Got that.

ACDR Okay. PRD was 11011.

ACDR - - was good.

ACDR No medication - and a full tank of water.

CC-H Got it.

ACDR Okay. CP: everything on Meal A. Everything on B
plus (garble) cookies, cheese. And everything on C.

CC-H Got it.

ACDR Okay. And Medical log: CRD48258. 7 good sleep, no
medication and 127 seconds for water.

CC-H Roger. Copy.

ACDR And DP - Meal A ate everything plus an orange juice.

ACDR B: everything plus apricots. C: scratch the
peas had an orange.

CC-H Roger.

ACDR (Garble) PRD has 61009; 7 good ones; and 50-60 drinks
of water.

CC-H Roger. 50 or 60 drinks of water.

ACDR Yes.

CC-H Sounds like it's agreeing with you gentlemen.

ACDR Yes, it really is.

ACDR Yes. Everything's going great up here Bo.

ACDR Come in, (garble).

CC-H Go ahead.

ACDR Didn't say one of the reasons we didn't eat the
peas is because we couldn't catch up with them. They were pretty wild up
here at O G.

CC-H I understand.

PAO This is Apollo Control. 169:13 ground elapsed
time. We're taking down the air-ground for the remainder of this pass
at ATS-6 satellite and Orroral Valley for the change-of-shift press
conference which will begin momentarily in the main auditorium with
flight director, Don Puddy and the experiments officer, J. J. Conwell.
We'll tape for delayed playback any Apollo air-ground that is accumulated
during the press conference. This is Apollo Control. Out.

END OF TAPE

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Time: 09:14 CDT, 169:54 GET
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PAO this is Apollo Control, 169:52 ground elapsed time. Acquisition at Quito, Ecuador in about 2 minutes and, we have about that much delayed tape from Orroral Valley and the completion of the ATS-6 pass last orbit, which we'll play back at this time and pick up live at Quito. Roll tape.

ACDR Bo, before I forget it, just a point on the temperature situation. The DM has been, particularly the hatch 3 end very cold continually up until this morning. This morning it's almost warm and of course, we got a pretty good collection of water down there. (Garble) can stay there if it keeps warm it up.

CC-H Roger, copy. Hatch 3 in the DM is cold, but starting to warm up and up until now you've had some water down there.

ACDR Roger.

CC-H Apollo, Houston. Two minutes until LOS. We'll see you at Orroral at 169:24 and that's about 8 minutes.

DMP Got you.

ACDR Okay, Bo.

CC-H Apollo, Houston. Good morning. We're AOS through Orroral. Talking to you for about 3 minutes.

USA Morning.

CC-H Good morning Apollo. We're AOS through Orroral for 3 minutes.

DMP Morning, Crip.

CC-H Morning, gents. How you guys doing this morning. Sound great, I've been sitting here listening with Bo for a while, listening to him be - be a newscaster. I think he does a much better job of that than me.

DMP You're all great. No favorites on the news. We enjoy it from all of you.

CC-H Apollo, Houston. We are about 45 seconds from LOS. Our next station contact will be Quito in about 28 minutes, 169:55. See you there.

DMP See you, Crip.

CC-H If you guys get a chance, we'd also like you to close the potable tank inlet valve, save a little water for us.

DMP Can do.

CC-H Thank you.

PAO This is Apollo Control. That completes playback of the accumulated tape. We're standing by now for acquisition through Quito, Ecuador.

CC-H Apollo, Houston. We're AOS at Quito for 3 minutes.

ACDR (garble) Vance right now.

CC-H Copy.

END OF TAPE

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Time: 09:24 CDT, 170:04 GET

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CC-H Apollo, Houston. We're AOS through the ATS. We've got you for - oh, about 12 minutes here.

ACDR Okay, Crip.

CMP Just passing over the Orinoco River delta.

CC-H I'm glad you pronounced that. I looked at it awhile ago and I didn't want to try.

CMP Oh, (garble) Farouk's the final judge I guess.

CC-H Rog. When you guys get squared away there, when - don't want to interrupt your pass, but I need to talk to Deke a little bit about this upcoming ETE he's doing on sample 5.

DMP Okay. Stand by one.

CC-H Okay. No rush.

ACDR Crip, I marked the spot at 10 - 170:06. 06 is when the - the muddy water from the orb - Orinoco delta suddenly stops; you got the blue water of the Atlantic. It goes out this far. Over.

CC-H Copy that. 170:06:06.

ACDR Yeah. You can just give that to Farouk and it's all a trajectory. You can see how the mud comes out this far into the Atlantic.

CC-H All right. That - puts us out a pretty good distance across there, then.

ACDR Roger.

DMP Hello, Crip.

CC-H Rog. How are you this morning, Deke?

DMP Just fine Crip. How are you doing today?

CC-H Very good. Got a moment for me to bend your ear about the ETE?

DMP Yeah. Go ahead.

CC-H Okay. Tom ran sample 1 for us and you're getting ready to run sample 5 and when he ended up checking that thing at an hour, he only found 2 bands in it - which - the only thing we can conclude is that - the first band had already passed on out through it. So what we're going to ask you to do is to - to check it a little bit earlier this time. So if you'd make up - if you got that checklist handy on page 1-8 of - for the ETE, I'd like you to make a note in there to - we want you to check it at 45 minutes after you start it.

DMP Okay, I'll do that, but we were looking at that thing off and on during his (garble) there yesterday, and I guess I don't think that a band got out past us.

CC-H Okay. Well that's - that's a good input. We did not have that knowledge before, but if you go ahead and take a look at 45 minutes and go ahead and use that same rule that we had before. The front band is advanced to the 110 millimeter mark. We want you to go ahead and go to the freeze procedures immediately; and if it's not, well you can let it go for another 15 minutes.

DMP Okay. We'll do that. If it got a little quiet, I might just try to keep a progressive light on it today and make sure.

CC-H Okay. One other item - -

DMP Unless that front band - -

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CC-H I'm sorry. Say again.

DMP I was just going to say that unless that front is a very faint one - the one that was obvious to us is certainly didn't get past us.

CC-H Okay. It's - to the best of my knowledge, it is pretty faint, but we're - we'll get a reading on it for you. Incidentally, there was some discussion about Alpha yesterday. You guys, they misplaced that little kitchen timer we had and consequently you were having little problems trying to get back to it. Would you - if that's so, would you like to go ahead and note the time that you start the thing, and then you could give it to us and we could give you a reminder when we're at the time.

DMP Well, we found it again. Late - late in the afternoon. So unless I lose it again today - we've got it stashed down here right now and we'll try to tape it down or something to keep it with us.

CC-H Okay. Copy that. Then - I believe you can go ahead and proceed normally then without getting a reminder from us. Did I copy that correctly?

DMP Yeah. But I don't mind giving a time anchor on it anyway, just as a backup. I'm not sure that timer's the greatest in the world, is it?

CC-H Okay. We'd kind of appreciate it if you could go ahead and note the start time then and we'll try to - try to help you out on noting when you might should take a look at it again. Also we'd like to - -

ACDR (Garble) Bo.

CC-H One - one other item was that some of you guys gave us a readout on voltage yesterday and where - that was higher than we had anticipated. We would appreciate it if we could make that sort of a nominal test now. The - give us an inch and we're going to take everything we can get. We'd like to go ahead and get a read out on - on voltage nominally and - after step 4 in your checklist, if you could.

DMP Okay.

CC-H The reason for that, I guess, is that if it's running high like that we're considering reducing the amount of - amount of time that we're using for the sample.

DMP Okay. Fine.

ACDR And Crip, we're deactivating the secondary evap at this time.

CC-H Okay. Fine. And Tom, what we're going to have to - we're going to have to leave that up to your discretion regarding the secondary evap. It looks like it's working good. We would just as soon leave it off as much as we can, but if you guys are getting warm, well you can activate it where we called out for activating the primary in the - in the checklist. I know that you got one period here, coming up around lunch time - where we'd have a good period there - you can turn it on if you wanted it.

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ACDR Okay. Why don't we plan that around lunch time?
Every little bit helps.

CC-H Rog. It looks - just looking at the data down here,
it looks like it's bringing it down pretty good right now. And for Deke,
one other item I had, whenever he gets a chance, since we have got the
secondary evap working and we know that that duct is clear, we can go
ahead and go back to the nominal configuration on the flow pressure re-
lief valve in the docking module; that is, go ahead and take the thing
to CLOSED and the pressure relief release valve reference to DOCKING
MODULE. Since the duct is clear the command module release valve will
work satisfactory. No problem.

ACDR Okay. We'll take care of it.

END OF TAPE

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CC-H Apollo, Houston. To get some loads out of the road before you start on your operations for this upcoming x-ray pass, we would like to go ahead and get ACCEPT, and then we'll give you a state vector and, also, we'll update a time for an EMP that we loaded last night.

CMP Okay. You've got it.

CC-H Vance - I mentioned that EMP. I'm not sure we got word to you last night, but we did load that raster scan EMP again because, for one of the passes that we had, we're going to substitute for x-ray. We're going to do a - instead of an EUV raster scan, we're going to do a helium glow. And I was trying to look at - ahead in the future, to see when I'm going to have to do some pad updates for you. And over on your next page at around 127 - correction, 171-40 - I believe you've got some time. And what we're going to try to do is - We got 2 pads: rev 105 and the following 106. We're going to modify slightly. And I guess we're going to have to call on you guys to help us out, there - about how many changes you can accept. We're trying to recover some data, of course, from the problem we've had with the x-ray. And - we've tried to put it together in sort of a - a manner that didn't perturbate you guys too much. And we'll just try to - try to live with it, whatever you guys can accept.

CMP Okay, well - yeah U'm -it's a good time for me to copy some pads.

CC-H Did I understand now - or then - was a good time?

CMP Right now would be good, as soon as I stop this maneuver. Okay?

CC-H Okay. Fine.

CMP And you've got POO now.

CC-H Okay. We see POO. And we're just coming up over Madrid. As soon as we get AOS through there, we're going to go ahead and start doing this uplink we talked about.

CMP Roger. Understand. And I'll be starting a maneuver, here, too.

CC-H We'll have to hold up, there. And, of course, that's the conflict with yours.

CMP Okay. How would it be if I'd go on the maneuver as long as possible and, when you get ready to uplink, why - we'll kill the maneuver.

CC-H We're - if you'll hold up on the maneuver there, for us, Vance - we think that we can accept it, starting a little bit late.

We'll try to get this uplink in as fast as we can.

CMP Okeydoke.

CMP The computer's yours.

CC-H Okay, we - see you stopped it. We'll start.

CC-H Vance, while we're waiting on this load - we might be able to get a little of this pad stuff out of the road. What I would recommend is, if you have - Look over on the 9 Alfa portion of your flight plan supplement. There's a helium glow pad rev 120.

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CMP Okay. Stand by.
CC-H Okay. I'm not sure we're going to have all this time available to get it, but at least you'll know where it - we want to go next time.
CMP Crip - Do you mean the normal supplement or the contingency?
CC-H No, I meant the normal - normal supplement. There's a 9 Alfa page in there - a set of alfa.
CC-H If - if you just look on your tabs, there, Vance - following the astronomy there should be a tab for 9 alfa pads.
CMP Okay. Right.
CC-H Tell you what -
CMP Okay. And - okay. You'll have to repeat the page number.
CC-H Okay. It was - it's actually the first one, there. That helium glow pad, rev 10 - correction - rev 120.
CMP Okay. So it's the first page and -
CC-H Yes sir.
CMP 5-3, there. Ready to copy.
CC-H Okay. What - I'm going to go ahead and give you 1 in advance, on this. We're going to get both of them on this same page. I'm going to take advantage of the blank portion down here. Okay. Before I press on - We've completed our uplink, and you can go ahead and press on with your maneuver. I'll let you get that started, and then we'll start on this pad. And what's happened is - I'm going to go LOS while you're maneuvering. And we'll get as much as we can.
CMP Okay. And the maneuver is going, and I'm ready to copy.
CC-H Okay. Instead of rev twon - 120 - mark that out, and it's going to be 106. Okay? The time for counting your DET up (garble) -
CMP Stand by one.
CC-H Okay.
CMP Okay. You were blocked out. I understand rev 20 is now rev 106.
CC-H That's affirm. And the time -
CMP Okay. And proceed on from there.
CC-H Okay. The time that we're going to count the DET up to is 173:42:42. Correction. Make that 173:42:50.
CMP Okay. Just keep going, and I'll tell you if you're going too fast.
CC-H Okay. Change your 52 DET time to 53. At 55, beside EUV, make a note to use detector 1. Prior to the VERB 24 NOUN 79 entry, I want you to make an entry for the EMP. And, incidentally, this will kill your high gain EMP. It's VERB 25 NOUN 26 ENTER, 1 ENTER, 1622 ENTER, 74007 ENTER.

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CMP Okay.
MCC-H You change it to 50.
CC-H Okay. On that - on your NOUN 79, on the last (garble), we want to change that to plus 0050 vice 00 - I say again. We want to change it to plus 00050 vice plus 00010.
CC-H If we go over the hill, here, your next station contact will be in 37 minutes, at Orroral. You're - also, right after you're changing your NOUN 79, we need to go ahead and have the D - Make a note for DSE high bit rate record forward command reset. Okay. Down at the bottom, following your power DOWN, I want to go ahead and change the NOUN 26's back, so the high gain EMP. And I'll give you those now. It's VERB 25 NOUN 26 ENTER, 10001 ENTER, 01412 ENTER, 66105 ENTER. Okay. Now what I need is a note that you can put wherever's convenient. And it's to read: at DETs of 0000 and 0830, turn x-ray high voltage power to 2 for 2-1/2 to 3 minutes. Accuracy, on that's not - not important. And then high voltage power OFF. What we're trying to do, as Bo mentioned to you earlier - If we turn the high voltage power off, and then just leave it on for, like, a couple of minutes - we seem to be getting good data. And that's what we want to do - is to pick up that data at 00 and 0830. Did you get most of that?

CMP Yeah. Let me try to read it back. Okay. Rev 106. Time 173:42:50. First change. Change 52 minutes to 53 minutes. At 55, over EUV, put detector 1. And just ahead of doing NOUN 79, do VERB 25 NOUN 26 ENTER, 1 ENTER, 1622 ENTER, 74007 ENTER. Change plus 00010 to plus 00050. And after the VERB 24 NOUN 79, go DSE high bit rate record forward command reset. You still with me?

CC-H That's affirm. Good readback so far.

CMP Okay. Then down at the bottom - and that's after the power down at the 14:38. Do VERB 25 NOUN 26 ENTER, 1000 ENTER - I'm sorry - 10001 ENTER, 01412 ENTER, 66105 ENTER. Then a note: at the DET 0 and 0830, turn x-ray pow - high voltage power - to 2 for 2-1/2 to 3 minutes, and then OFF.

CC-H Okay. That's a good readback.

CMP Okay.

CC-H Okay. The other item - well, you're getting close on this other pad. What I wanted you to do is - in the blanks that you've got below, on this thing - We're going to - I'm going to read you a new pad for rev 105. And we can just fill that in. How do you feel about continuing that, or do you want to pick that up a little bit later? Don't want to rush you.

CMP No if we've got comm, go ahead. And that's on this same page.

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CC-H - - low on this thing we're going - I'm going to read you a new pad for rev 105 and we can just fill that in. How do you feel about continuing that or do you want to pick that up a little later. I don't want to rush it.

CMP We've got comm. Go ahead. And that's on the same page.

CC-H That's affirm. Why don't you just draw a line and put this one for rev 105.

CC-H Okay. We want to start the DET counting up to 172:03:34.

CC-H Okay. And we'll start a DET of 55:00 under data column make -

CMP Hey.

CC-H Go ahead.

CMP Okay Crip, sorry - I'll have to ask you to start from the beginning 172 and ON.

CC-H Okay. No sweat. Count the DET up to 172:03:34. At a DET time of 55:, under data column make a note for a helium glow and EUV ops.

CC-H Add a DET of 400, note under angles for attitude we want 256.60; pitch is 240.50; yaw is 000. Also at 4 under data column we want to make x-ray ops.

CC-H Okay. AT a -

CMP Uh - -

CC-H Go ahead. - -

CMP Okay, I got - let me read what I've got now, I've got a little question.

CC-H Okay.

CMP 172:03:34, starting at 55:00, turn - do a helium glow and EUV ops then at 40:00, did you say?

CC-H That's correct.

CC-H Whoa, whoa, I'm sorry. That's 4 minutes on the DET. You can make it 04:00.

CMP Okay. 04:00. And then what was the 256? I got yaw was 0.60, 240.50 and 000. But what did the 256 represent?

CC-H Okay. The roll is 256.60.

CMP Okay. Got you.

CMP Okay, so at 04:00 and roll of 256.60, pitch of 240.50 and yaw of 000 and do x-ray ops.

CC-H Okay. That's fine. I've got a couple more line entries on that but we're about to go LOS on the ATS so why don't we just hold them up until you finish with this pass you're on. And we'll see you at Orroral in about 30 minutes.

CMP Okay. Very good Crip.

CC-H Okay, Vance, thanks a lot. I appreciate taking - you taking the time to do all that good writing for the experiment folks.

CMP Okeydoke.

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Time: 09:47 CDT, 170:27 GET
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PAO This is Apollo Control at 170:32 ground elapsed
time. Because of the attitude change in the Apollo for the extreme
ultraviolet and helium glow experiments we're now LOS through the
ATS-6 satellite. We'll be back in communication through Orroral Valley
with the S-band on the antennas in about 25 minutes. We'll return at that time. This
is Apollo Control at 170:33.

END OF TAPE

ASTP (USA) MC563/1
Time: 10:19 CDT, 170:59 GET
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PAO This is Apollo Control. We're up live across Orroral Valley at this time. Little bit ahead of the predicted acquisition time on the clock. No response yet from the crew. We'll stand by.

CC-H Apollo, Houston about 30 seconds left here at Orroral. Next station contact at Quito at 171:28 - 171:28. That's about 30 minutes from now.

PAO This is Apollo Control. At 171:02, ground elapsed time. We've had loss of signal with no response from the spacecraft, across the Orroral Valley tracking station. Next station in 25 minutes, Quito, Ecuador. To set the record straight on the wakeup music this morning, instead of the planned "Legendary Cowboy," somehow Red Engle's version - Red Engel and the Unnatural Seven version of "Cigarettes, and Whiskey, and Wild Wild Women," was beamed up to the crew as wakeup music. 24 minutes from acquisition at Quito. Apollo now just south of the southern most island of New Zealand. Get a few numbers here on the trajectory measurements at the current time. Present altitude of Apollo, 119.5 nautical miles; perigee, 115 nautical miles, apogee, 121. Orbital period 1 hour 28 minutes 39 seconds. Spacecraft weights 29, 961 pounds. orbital velocity, 25,520.2 feet per second. At 171:04 ground elapsed time; returning in 23 minutes at Quito, this is Apollo Control.

END OF TAPE

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PAO This is Apollo Control - 171:27 ground elapsed time. 50 seconds to the tracking station Quito. Final time this morning. Again on this pass we'll lose the ATS-6 communications at 171:58 as they maneuver into the attitude for the science experiments. Extreme ultraviolet absorption and helium glow. The following revolution there is another run of earth observations with tropical storms, water color in the Pasific, internal waves in the Gulf of California, zones of color observations near Sudbury, Canada, on the northern portion of Lake Huron. We have AOS through Quito.

CC-H Loud and clear. How me Tom?

ACDR Roger. Through Quito now I guess.

CC-H That's affirm we're at Quito we've got you for about 4 minutes. And I - I said loud, actually I'm reading you clear and kind of faint.

ACDR Okay. Would you pass on to F(garble) troops on this last pass. Due to the problems we had on the, you know, getting things started up, as far as the DET time, we finally had the X-ray data from the DET times for 5 minutes were 24:00 to 29:00. Over.

CC-H Okay. Let me get that again. Is it 2400 to 2900?

ACDR Yeah. That was when - That was supposed to be from 21:20 to 26:20, we ended up getting from 24:00 to 29:00 and the people made a mistake when they omitted that (garble) rake in the DAP. We couldn't get to that attitude in the period of time. (Garble) was a high DAP rate and these - that was scrubbed out in the - in the revised pass.

CC-H Oh. Okay. That's one of the dangers we put ourselves in and when we start redoing the pads. Well, at least we got something.

ACDR Okay.

CMP Crip, did - did Tom, did you explain the first part here? Okay.

ACDR Hey, Crip. Do you - I guess - do you have a new pad for x-ray rev 105.

CC-H That's affirm. I had started on it awhile ago with - with Vance and I need to - to go ahead and continue that. Would - we can get it now or we probably got a little time that - after we lock on the ATS too, we got a couple more minutes left in this pass.

CMP Okay. I'm ready to copy. As I recall your last words were 4 minutes and you gave me a roll, pitch, and yaw and X-ray ops.

CC-H Okay. That's - that is correct and our next entry under the DET line is at 10:15. For roll pitch and yaw we have 258.60. Pitch is 205.70. Yaw is no change. It is still 0000. For a DET time of 19:10, roll is 255.60. No change on pitch and yaw. At a DET of 25:00, under data column, want to put EUV helium glow and X-ray power down and then go back to flight plan. I need also a note, that when you get to each attitude turn the X-ray high voltage power to 2 for 2 and a half to 3 minutes and then high voltage power off. Did you copy that?

CMP Okay. Readback. After 4 minutes. TET at 10:15. Roll, 258.60. Pitch, 205.70. At 19:10, 255.60 for roll. At 25:00 a EUV helium glow and X-ray power down. Go to flight plan. Note that each amp and each attitude have high voltage power on for 2 minutes and then off.

CC-H See you at MILA in one minute.

CC-H Apollo, Houston. We're talking at you through Bermuda now.

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ACDR Okay, Crip.
CC-H And that was a good readback Vance.
CMP Okay.
DMP Hey Crip. A couple of quickies here. We started the ETE about 10 minutes ago, I guess. I got the timer running. We're late on that for 2 reasons, number 1 we lost that durned reflector three times so far today and the process of rebuilding one and finally discovered it again, and secondly we got so much humidity in here that every time we open that thing up, every thing gathers frost instantaneously. For example, 5 was frozen in. We finally broke it loose. That's just status. We've got a small problem, I'm supposed to be doing fish thing; I think I called you yesterday on the 16-millimeter MAG you use for that. We've got a MAG 129 that Tom used the first day and I was about to use the rest of that, however we've discovered that we're almost fresh out of DAC magazines and we're debating whether to hold this for entry or use it up on the fish. I guess we need a recommendation from you guys.
CC-H Okay. Understand. MAG 29 is the one we planned on using. Understand. You're almost finished with it?
DMP There's 80 percent left but I used up all of MAG 28 on the first two fish takes for some reason. We (garble) red light at the end of it yesterday.
CC-H Okay.
DMP It's - it shouldn't have happened; I think we should have had enough film there to do that, but - and I was timing it and I think reasonably well.
CC-H Okay. Our recommendation Deke, is still to go ahead and proceed using MAG 29 for it.
DMP Okay. But we may not have any film left for entry photography and I'm sort of concerned.
CC-H I believe we said - I think we still got that covered and I'll verify that for you Deke. Incidentally, did you manage to get a voltage reading off of that ETE for us?
DMP (Garble)
CC-H Rog.
DMP We got 37.
CC-H I'm sorry Deke I couldn't copy that. Would you say it again?
DMP 37
CC-H 37 volts. Thank you.
DMP Roger.
CC-H I'm going to keep quiet here, while we hand over to the ATS.

END OF TAPE

ASTP (USA) MC565/1
Time: 11:01 CDT, 171:41 GET
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CMP Houston, Apollo.
CC-H We're back with you Vance.
CC-H CP, Houston. Go ahead Vance.
CMP Roger Crip. I'm looking at this rev 105, special pad I copied a little while ago. And I guess the initial attitude is the one called out for 4 minutes. Is it okay to go to that at this time or will you lose comm?
CC-H Okay. That attitude you went to, I guess we show you there right now. The comm - comm attitude that you're currently in is going to be the first data take. We - that's the one - we just sent you to early.
CC-H You understand that then. That we modified that attitude earlier, I guess Bo did it for you and it just put you in the correct attitude now for that first 4 minutes of data take.
CMP Okay, that's - that's good then. We'll stay here till 4 minutes.
CC-H That's affirm. Wonder if I could get a clarification from Deke on that voltage awhile ago. We copied 37 and it should be something on the order of 200 something. Was that 237?
DMP Crip, I'm sorry. I thought you said BATT C. You were talking -
CC-H I'm sorry I wanted the - -
DMP You said ETE. huh?
CC-H That's affirm. I thought that sounded awful much like a battery voltage.
DMP That's exactly what it was. I thought you said BATT C. Okay stand by, I'll get her for you.
DMP Okay, Crip. The voltage is reading 193 right now.
CC-H Copy. 193.
DMP Roger.
DMP You were talking experiments, might as well flush another one into the system. We've been looking at the crystal growth everyday per schedule. I don't see much of anything happening in there. Went in to take a close look this morning and there's bubbles in three or four compartments. But I certainly don't see any evidence of any crystals. I don't know if there's anything we can do on that subject.
CC-H Okay. Can you give us a little description of the bubbles. Their quantity, size and so forth.
ACDR Well, okay, stand by - -
CC-H - - well, I - -
ACDR - - I'll try to give you a quantitative analysis.
CC-H It's not necessary for you to go digging it out now but sometime if you give us a little bit detailed description I'm sure the PIs would like to have it.
DMP Okay. Tell you, why don't you give me a little time because I've got to get the flood light back on to do that.
CC-H Sure. No problem at all. Just the next time you have an opportunity to take a look at it. And incidentally, your flight

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plan shows that we're going to lose comm on the ATS here but because we're doing at a new attitude we should have comm with you all through this ATS pass.

DMP Okay.

CC-H And a couple items for both Vance and Deke. I'm standing by with times for crossing the Adriatic, that sea farming area we talked about a little yesterday and also for Deke got a - I'm going to have a time for the crossing of Wisconsin. It'll probably be easier for me to just to call those a little bit ahead of time. Give you 10 or 15 minutes warning about it.

DMP Okay, I'm ready to copy.

CC-H Okay. We should be crossing the Adriatic at about 173:26. Not sure of the attitude, it's going to be much - I mean - the viewing is going to be much better than it was yesterday, though. For Deke, the - should be going across Wisconsin at about 174:40, somewhere on that order, 41.

CMP Okay, got those. Thank you.

CC-H You're welcome. Incidentally, talking about that DAC film for entry, we currently got CX05, which should be in f2, scheduled for - for entry. We're assuming that's still available.

DMP Okay, we'll have to get back with you on that, Crip. Right now, Tom's taking an inventory of the DAC film.

CC-H Okay, fine.

CC-H DP, from Houston. Vance, have you got an opportunity now to make a couple of small mods on your flight plan, regarding ATS and - attitude. A couple things. Or would you like to get them later, no big a rush on them either.

CMP Okay, yeah - go right ahead.

CC-H Okay, why don't you flip over to 173:10. We had not anticipated having ATS there, but because of our attitude change we are going to have it. And, I'd just like you to make a note down there to acquire ATS, and with a pitch of minus 35, and yaw 114. And - just do it like you normally do.

CMP Got that.

CC-H Okay. And, also, of course, that note down there about losing it, losing the ATS is not applicable - or not being available rather. The other item was over 174:13. To get us to this new VIS OBS attitude, that we've been working at, we need to change R2 on your NOUN 78 to plus 06000, instead of 9000.

CMP Got it. Roger.

CC-H Also, we'll be able to keep ATS down there at 174:45. We dumped - no need to say that should not be obtained, and we need to change those angles at 174:50 to a pitch of minus 10, which it is and a yaw to minus 25. I'm sorry, I'm sorry. Let's start over again. Change the pitch to minus 25, the yaw remains the same.

CMP Okay, so in summary, pitch is minus 25, and yaw

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is 335 - 355.

CC-H That's good. That's all I've got for now, another
little item I'm going to be coming to you a little bit later is that
we got word that the Red Tide has been spotted off the East Coast there.
And, I'm going to give you a time and camera and so forth a little bit
later to be picking that up.

CMP Okay. Good.

CC-H Apollo, Houston. We notice that we're - we're
still setting in accept, and you can go back to block whenever you'd like.

ACDR Roger. Block.

END OF TAPE

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CC-H Apollo, Houston. If somebody could get down around 230 for us - from the data we saw last time, it looks like the CAL source for the X-ray is hung up in front of the instrument; we need you to take the X-ray purge switch to the CAL position and hold it for about 10 seconds and then release it.

CMP Okay. Stand by.

CMP Okay. We went to purge for 10 seconds and it (garble).

CC-H Okay. Appreciate it.

CMP I mean, to CAL.

CC-H To CAL, yeah.

CMP - - for 10 seconds.

CC-H And, I was just telling Ron down here that nomenclature does it to me, too.

CMP Right. Purge the switch that you make a CAL with.

CC-H Roger that.

CC-H Would this be an opportune time while we're waiting to get these things started to tell you a little bit about the red tide site that we've got coming up?

CMP I'd rather - I think Deke's probably got that. I'd rather kind of have him here under the headset.

CC-H Okay.

CMP He's pretty busy right now.

CC-H Okay. We'll hold up on it. Well, might tell him that I'm standing by to talk to him about it whenever it's convenient for him.

CMP Okay.

CMP Houston, Apollo.

CC-H Go ahead.

CMP Just studying the pad 105 here, and at 4 minutes, of course, we have the maneuver and X-ray comes on right at the same time. You want X-ray ON during the sweep of that maneuver?

CC-H That's affirmative. We've looked at - looked at these and don't see any problem with them.

CMP Okay.

CC-H Actually the maneuver's a very - very short one, Vance, and by the time you get down there and get the door open and everything, you're going to almost be in the attitude.

CMP Okay.

END OF TAPE

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CC-H Apollo, Houston. We're still having problems with that X-ray cal source. If somebody could take the opportunity to go down to 230 and hit it to CAL once more and don't - don't hold it for 10 seconds this time, but just hit it and release, just like we normally do.

CMP Hit and release.

ACDR Okay. Coming down the cal - mark - release it.

CC-H Incidentally, Tom - show you that that was a good head on that - picking up that target awhile ago, on that previous pad. That worked out real well. We got the whole thing in. And we were getting good X-ray data on that - at that time. So that helped out.

ACDR Okay. Real great.

CC-H Apollo, Houston. Tom, that one didn't work. I guess about the only other thing we can think of is that - why don't you try several successive positionings of the switch to CAL? And let's see if that'll get it moved out.

ACDR Okay. Understand.

CMP Okay, he - Tom hit it about 5 times to CAL.

CC-H Okay. Would appear that it - oh, stand by one.

CC-H Apollo, Houston. That cal thing is still stuck out in our road. However, that's not preventing us from getting data on the X-ray, and that's - that's still working out. So, appreciate your efforts. Thank you.

CMP Okay. And we turned the high voltage power off.

CC-H Rog. We're sitting down here looking at the data at this time. Leave it on.

CMP Leave it on? Okay.

ACDR Okay. High voltage power 2 coming back on. Mark it.

CC-H Vance, if you're working the DSKY there, we're - see, we're getting close to your next maneuver and do not see it loaded.

CMP Crip, Deke's here.

CC-H Rog, Deke.

DMP Hey, I just checked electrophoresis - 25 minutes - and it's at the 73 millimeter mark. It was a bright stripe, I could see. However, I wouldn't term it a stripe. It looks to me like it's a sphere, either coming - or about 40 millimeters. It doesn't seem to be banding today, like it was yesterday.

CC-H I'm sorry, Deke. You're way, way down. I can barely copy you. Would you say again where the banding is, please?

DMP Okay, let me try it again. How's that?

CC-H That's much better.

DMP Okay. Yeah, I said it's 45 minutes - the first of the - I wouldn't call it a band. I guess it's - what I'd call the front of the color area - is at about 73 millimeters. And that is a colored area that covers about 40 millimeters. But I don't - I wouldn't

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call it bands, at all. I'd just call it an area of coloration within the tube.

CC-H Okay. Copy that. It's not forming little bands. You had seen the bands before - before flight - how it was supposed to divide up, had you not?

DMP Yeah. Well, we saw them on sample 1 -

CC-H Rog. And I understand this sample 5 is not banded in that manner. Let me see what I can get you for a future plan of action.

DMP Okay.

CC-H Incidentally, Deke, on - on our upcoming pass across the States, we are going to have an opportunity to look at the Red Tide. And I was going to get you some information about that whenever it's convenient for you to copy it.

DMP Okay. Stand by for it.

END OF TAPE

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CC-H What might be convenient for you Deke is if you can just get out your - your earth obs book on target 5 Foxtrot and I can just relate it to you on there.

DMP Okay. Fine. Just a second.

DMP Okay. Go ahead.

CC-H Okay. To describe to you where the ship spotted it if you're looking at 5 Foxtrot, right above where we got the word Booth Bay written in, you can see there's a river that looks like it's flowing - flowing south there that comes out. Well, it was right at the mouth of that river that the Red Tide was spotted.

DMP Okay. Got you.

CC-H Okay. Our recommendation on - on the camera is - well for the window should be (garble) out of CM3. Want you to use the silver camera of course. And use 50 with an f-stop of 9 and a half and a speed of 1/500.

DMP Okay. Got that.

CC-H Frame intervals should be about 6 seconds - every 6. And we should be passing over that if you want to note it at about 173:09 to 13. And we'll give you a call just before that if you'd like a reminder.

DMP Okay. 173:09. And you want to shoot a mapping strip through (garble).

CC-H Negative. You can go ahead and just use it and take a shot about every 6 seconds or as you see fit.

DMP Okay.

CMP Okay, Crip. And we have high voltage on and we'll leave it on until you say turn it off.

CC-H Okay.

CC-H Vance, did I copy that you had the high voltage on now?

CMP That's affirm. We turned it off during the maneuvers.

CC-H Roger.

CMP Trying to comply with your note somewhat.

CC-H Yeah. Okay. The accuracy on that is not - all we need is the approximate time on couple of minutes - couple to 3 minutes.

ACDR And for the fish expert, if you want any information, I can give it to you.

CC-H Why don't you go ahead and shoot it to us.

ACDR Okay. Number 1, in package 5 now has an enhatchment in it. And you're missing one out of package 4 this morning. One fatality, like I said, (garble).

CC-H Let me make sure I got that. In package 4 that - we have lost one or you had 1. Is that correct?

ACDR There has been 5 white ones. Today there are only 4.

CC-H Okay.

ACDR (Garble)

CC-H Okay. For Vance. We're not seeing anything on that high voltage right now, we're assuming that you're in 2. If that's so why don't you go to high voltage 1.

CMP Okay. Go from high voltage 2 to 1.

CMP Okay. We had a miscoordination here. It was - it's

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just been turned off and now it's back to 2.

CC-H Okay. Fine. Yeah. That's better.

CC-H For the DP. Deke, on the ETE, I guess what we want you to do is to go ahead and shut it down at 60 minutes.

DMP Okay. You want an early shut down.

CC-H Rog. Go ahead and do your normal freeze here.

ACDR Crip, I've got a question.

CC-H Yes sir. Go ahead.

ACDR Okay. With the (garble) to the last footage we're trying to scrounge off of each mag on the sixteenth's now. We've got the - the 70 pretty well squared away. That - The shoot out the window at Sun just an earth view out the window? You know, on these earth obs pass, what's the setting (garble)? I think we use a 75 milimeter lens, right angle brackets, but give me a ball park setting for color exterior film. Over.

CC-H You want a - give me that once more Tom. You weren't coming in very clear. For a 75 milimeter lens, on that color exterior, you want the settings?

ACDR Yeah. For the DAC.

CC-H For the DAC. Roger.

ACDR Hello Houston, Apollo.

CC-H Go ahead, Tom.

END OF TAPE

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ACDR Hello, Houston, Apollo.

CC-H Go ahead, Tom.

ACDR Okay. I assume for Earth OBS that you want us to use a 75 millimeter with the right angle versus the 25. Get me a reading on that, please, too.

CC-H Okay.

CC-H Apollo, Houston. We're about 2 minutes from LOS. Our next station contact is going to be MILA in about 36 minutes. On your powerdown for X-ray, we do not want you to go to the CAL position; the thing came loose by itself and we do not want to do that first step on the normal powerdown. For Tom, we would like you to use Table B on your exterior photo cue card for the fittings on the - with the DAC - those are applicable with the DAC as well and you can use whichever lens you'd feel most comfortable with; it doesn't make any difference.

ACDR It doesn't matter. That what gives it more (garble) to the people - that it's either 75 or 25.

PAO This is Apollo Control. Loss of signal through ATS-6 satellite. Next station will be Merritt Island Launch Area in 34 minutes. In addition to the scheduled Earth Observation sites, tropical storms in the Pacific, water coloring in the Gulf of California, internal waves, that is by Jia Concepcion, color oxidation zones in the northern portion of Lake Huron near Sudbury, Canada. An additional site was passed up by spacecraft communicator Bob Crippen; an AOS timed for the state of Wisconsin, which happens to be the home state of docking module pilot Deke Slayton - was born in Sparta, Wisconsin. So on that particular rev, rev after next, at about 174:40 ground elapsed time, he ought to be able to see his old home ground - assuming it's clear there. We'll return in 33 minutes at Merritt Island Launch Area. And the scheduled LOS out of attitude for ATS-6 next rev has been scrubbed, so we should have continuous communications the next two revolutions, actually, all the way across the coverage of the satellite. This is Apollo Control at 172:31.

END OF TAPE

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PAO This is Apollo Control. 173:03 ground elapsed time.
30 seconds away from acquisition through Merritt Island Launch Area.
We should have acquisition momentarily and we're standing by for Bob
Crippen's call -

CC-H We're AOS through MILA. We have you for about 6
minutes.

ACDR Roger. Are we near Houston, right now? Over.

CC-H Well you've just crossed over into the Gulf of Mexico,
coming across the coast of Mexico. Houston and the Texas coast should
be coming up pretty shortly.

ACDR Roger.

CC-H A couple of items on this pass coming across here.
I'd earlier given Vance an update and told him and we were going to use high-
gain antenna angles and so forth and we've changed our mind on that.
(garble) You do not need to acquire the ATS. Not going to be available,
we released it.

ACDR Okay.

DMP Hey, Crip. Give you a reconfirmation on the
window for the New England area. Looks to me like it's going to end up being
window 5. We don't see anything on it or anywhere else to speak of.

CC-H Okay. The one we'd been given earlier was out
of 3. We'll reverify that for you Deke.

DMP Okay. Maybe by the time we get up there, that'll be
right. It's not right from here anyway.

CC-H Roger.

DMP (Garble.)

CC-H Okay. Also, if somebody can flip back for us and - on
the previous page there, we can pick up that last P52 results. We'd
appreciate it.

ACDR Ready to copy?

CC-H That's affirm.

ACDR Star 30, star 17, NOUN 5 all zeros, plus 114,
minus 85, minus 34, torqued at 171:08:00.

CC-H Okay. Very good, thank you.

CC-H Apollo, Houston. Like to say a few words about
this REV 106 pass on this helium glow coming up to you, if you got a
moment to talk about it.

CMP Go ahead.

CC-H Okay, Vance. Maybe you're familiar with it. This
was going to be a - this is going to be a helium glow raster scan, which
was something that we desired to get in, but didn't make the priorities
normally. And since the X-ray's not working, all that's (garble) so
we're going to go ahead and do it. Basically, it's going to work just
like your E - EUV raster scan, except we put a different time constant
in it, so it's going to be scanning a larger area.

CMP Okay, understand. That's what we'll have for PAD
106.

CC-H That's affirm. And, of course, that replaces

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the nominal 106 PAD.

CMP Right.
CMP Houston, Apollo.
CC-H Go ahead, Vance.
CMP I just take it that we want to use - make the raster with - P4 - VERB 49 rather than P20. Is that, cause we get a longer raster or what ?
CC-H What happens, Vance, is that you'll have VERB 49 maneuver to get to the initial attitude, okay? And, then when you go in and follow the pads down - down through what we've given you in there, it'll go ahead and be initiated on the - I think it's initiated on that VERB 31 ENTER.
CMP Oh, roger, roger.
CC-H Yeah - you've got to do all the other stuff, but when it really starts rastering is when you get the 31 ENTER.
CMP Okay. Oh, okay, I was thinking of another kind of scan.
CC-H yeah. And, you'll notice a little bit later down there at 7:08 you'll do another VERB 49, which will put you at a different attitude and then you'll reinitiate the - the raster.
CMP Okay.
CC-H Regarding Deke's question on the Red Tide. We anticipate that's going to come visible first in window 5, come across window 3, and through 1. We thought 1 would be - a correction - we thought 3 would be the best total viewing.
DMP Okay, thank you, Crip.
DMP Okay, we're over Cape Cod right now. I think we got her.
CC-H Very good, outstanding.
DMP We're having trouble telling sun glint from Red Tide, however, (garble).
CC-H Yeah. I appreciate the problem.
CC-H I'm going to drop you through a keyhole. I'll give you a call when I'm back with you.
DMP Okay, Crip. We got some pictures up through that area and we see some water that - that's obviously got (garble) it up pretty good and I'm trying to differentiate if it's really the Red Tide or red sediment. It's difficult for me to (garble) frankly.
CC-H Okay, very good. If you got the photos, we should be able to make a determination once we get them back. Thank you.
DMP Rog. And the other complicating factor is we got Sun glint in here which kind of (garble).
CC-H Copy that.

END OF TAPE

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CC-H - - make a determination once we get them
back. Thank you.

ACDR Rog. The other complicated factor is that we have
sunlight in here, and it's kind of bouncing -

CC-H Copy that.

CC-H Apollo, Houston. Talking at you through
Newfoundland now and we do not show a VHF downlink. Might check to
make sure that we've got that VHF AM ON.

CC-H Apollo, Houston. How do you read on VHF through
Newfoundland?

CC-H Be advised if you're reading me, I'm not reading
you and we're going to have you Madrid on that stand in about 4 and
1/2 minutes. Talk to you there.

SPEAKER Cap comm intercom over 2.

CC-H Apollo, Houston. We're LOS through Madrid now. I think
we got you 4 minutes. How do you read.

CMP Loud and clear, Crip.

CC-H Hey, Vance, we had some funnies on our downlink
coming across the States and it looks like maybe the comm panels
might be misconfigured. Can we verify it please that everybody
on 6, 9, and 10 got S-band and TR and VHF AM and TR.

CMP Okay. Verify all three panel S-band and VHF with
TR. Stand by.

CMP Okay, Crip. Panel 10 was fine. Panel 6 and
9 did not have VHF AM on TR.

CC-H Okay, fine. Appreciate you getting on. I
lost you there through Newfoundland I - I couldn't hear anybody
talking to me and I get lonesome down here. We're going to get
ready to come across the Adriatic like we talked about. You're maneuvering
though so we're not really sure whether it's going to be possible for
you to see anything or not.

CMP Okay. What's the time of that again ?

CC-H Oh about 46. Yeah.

CMP - - 46

ACDR Say Crip, one reason we've been knocking VHF off is
to get rid of all this powernoise.

CC-H Yeah. I suspected that might have been the case. Well
if - if it gets to be too much of pain, we've got you on S-band
every place else except Newfoundland.

ACDR Okay.

CMP And Crip, I on - in the lull maneuver rate. Is that
proper for this particular maneuver?

CC-H That is affirmative and we thought we'd have
you change your DAP here at DET of 53.

CMP You were cut out by (garble) Towers. Say again.

CC-H Okay, if that - if that thing is really giving
you a problem, you can go ahead and secure it. I've got you good
on S-band but your correct lull maneuver rate is satisfactory. And when
we get to a DET of 53 we'll change it to a 1/2 degree.

CMP Fine.

END OF TAPE