

ASTP (USA) MC588/1
Time: 16:26 CDT, 177:03 GET
7/22/75

DMP If you're all happy, I'm not going to complain.
CC-H That's affirmative.
DMP Still don't (garble) I got myself clocked at 64
revs here. Like to see if they got anything any different.
CC-H I'm sorry Deke, I was having trouble reading you
for Vance, - could I go ahead and have the high voltage on please?
For 2.
CMP All right.
CC-H Did I understand - Dick was helping me - setting
here and translating - Did you say 64 beats per minute you got all the
way up to?
DMP I might of got to 72. That's the best I've been
able to do.
CC-H Well, for you that's - -
DMP (garble)
CC-H That's a pretty high heart rate, isn't it?
DMP No, not on some of these. You still might check
it once in a while up here every other 48 (garble)
CC-H (garble)
DMP Clean living.
CMP You want that high voltage off while we're maneu-
vering here Dick, or for a short time. I mean - Crip.
CC-H Oh, we saw that - we think you got the ARM SAFE
switch down there instead of high voltage. Would you check that for
us please? That should be in ARM, and wanted the high voltage to 2.
CC-H And I guess it doesn't make any difference now on
the high voltage. You can go ahead and turn it OFF.
CC-H Okay, we're about to go over the hill on the - the
ATS here. And for you Vance on the (garble) vis ops attitude we need
to update that R2 on your NOUN 78 to the 6,000 that we've been using
instead of the 9,000. We'll see you at Orroral in about 2 and a half
minutes.
PAO Apollo Control ground elapsed time 177 hours, and
70 - and 7 minutes with loss of signal through ATS-6 satellite. We
will have acquisition through Orroral Valley in 1 minute and 50 seconds.
We'd like to go over some of the ground rules for tomorrow morning's
live press conference with the crew of Apollo. All news media should
be in position in the main auditorium in building 2 by 7:20 a.m. ten
minutes before the start of the cres - press conference. We request
that all media should be - seat side by side rather than leaving space
between. The media should wait to be recognized by the moderator,
and wait for the mike before questioning the crew. Whenever possible
the moderator will identify the individual being recognized by name
and media affiliation. We request that the news media not hold on
to the microphone. The media will be allowed one question to provide
greater individual access to the crew. Follow up questions can not
be permitted because of the limited time involved in the press confer-
ence. News media questions should be addressed to specific crew mem-

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bers, avoiding questions requiring a response from more than one crew member. When asking question media should speak slowly and phrase wording so it is clear when the astronaut should respond to the question. Again, we request the media be in position in the main auditorium in building 2 by 7:20 a.m. Wednesday morning. Ten minutes before the start of tomorrow's live press conference with the crew of Apollo. Next acquisition through Orroral Valley tracking station in 20 seconds. We'll hold the line up for cap comm Bob Crippen.

CC-H Apollo, Houston. We are AOS through Orroral for 3 and a half minutes.

DMP Okay.

CC-H Hey, Deke - all our medic folks would - really appreciate all the efforts you went through to get that data. It all came down nice and clean here. It looked real good.

DMP Okay, fine, got everything you want ?

CC-H Yes, sir, everything was super.

DMP Okay, I'm going to go ahead and exercise a while then and get some.

CC-H Okay, fine.

CC-H And Apollo, Houston - got one item I guess I'd like to just get up in general any time anybody's got a moment to take it. There's no rush on it. We can get it later if you're now at a busy time.

CMP Go ahead.

CC-H Okay, Vance, we would like to get the camera that we've currently got in 873 back in the docking module - camera only, not the cable - brought in and put on location 606, in order to get all set up and fitted away for this early morning press conference that we've got scheduled in the morning.

ACDR Okay, is that - -

CMP You want 873 into the command module or docking?

CC-H I want it brought into th - into the command module and placed in location 606.

CMP Okay, got it.

ACDR And is that just the - just the TV and the monitor, or the cables and everything?

CC-H No, we do not need the cable it's connected to. I think we should have a cable still available there in the 606 location somewhere.

ACDR We do. Yeah. Okay.

CC-H Okay, and the only other item we've got - and we probably don't have time to do it here - is that - we have one last pad to do, after this upcoming one on 109. And about three weeks ago we had a satellite discover an E - a new EUV source, and we really could appreciate it if we could make it through the pass. That will allow us to get it up to cover that particular target. And it's going to be several line entries, but not nearly as long as some of the ones we've already made. If somebody is available at Hawaii, which comes up in about 15 minutes, I would certainly appreciate being able to read the

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modifications to you there. Incidentally your recovery ship is also going to be active on - on your - at VHF, and you might be hearing them when you come across there this time.

CMP Okay, real good and I'm sure somebody will be available to copy. Hope we can find out something about this new UV source here. - Did - we'll - go ahead and maneuver. Okay?

CC-H Okay, fine - press on, and the PI's really appreciate it. He's pretty excited about this new target.

CMP Okay.

END OF TAPE

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Time: 16:36 CDT, 177:13 GET

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PAO Apollo Control. Ground elapsed time 177 minutes and - 177 hours 16 minutes. Loss of signal through Orroral Valley tracking station. Next acquisition in 11 minutes and 12 seconds will be through Hawaii. On this Hawaii pass, the crew will perform, again, photographs and visual descriptions of the upwellings around the Hawaiian Islands. And as the spacecraft passes over the coast of Washington - the state of Washington, they will ask to photograph and describe any suspended sediments they see in the waters of Puget Sound. However, the weather map here at the Mission Control Center indicates that that area of the western coast may be cloud covered, so that portion of the experiment may be deleted. We'll have acquisition in 10 minutes and 35 seconds. At ground elapsed time of 177 hours and 17 minutes, as Apollo crosses the South Pacific on revolution 108, this is Apollo Control.

END OF TAPE

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Time: 16:48 CDT, 177:26 GET
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PAO Apollo control, ground elapsed time 177 hours, and 26 minutes. Acquisition coming through Hawaii in 50 seconds as the crew will be performing another Earth observation experiment, taking photographs and describing upwellings and bowwaves around the islands of Hawaii. On this pass they were also scheduled to do photographs of Puget Sound however, the weather map here at the mission control center indicates this may be cloud-covered. We anticipate a change of shift briefing at the main auditorium, building 2 at 5 p.m. central daylight time, with flight director Pete - Frank Littleton, Skip Larson, science officer and cap comm Bob Crippin.

CC-H Apollo, Houston. Hello at Hawaii for 6 minutes.

ACDR Hello, Dick. Coming up to Hawaii.

CC-H Hello, Tom. The one thing that I've got to get up here is some changes to this upcoming rev on 109 pad so if somebody could whip it out I'll give them to you real quick. It won't take but a couple minutes.

ACDR It's all hooked up.

CC-H Okay. If you're ready to copy. The first change is the - up there about 3 lines down at a time of 46 minutes. Over there in the note, change it to read "manually roll to 140 degrees.

ACDR Roger. Manually roll to 140.

CC-H Okay. Down at the time of 0 plus 00, just delete the x-ray ops.

ACDR Got it.

CC-H Okay. A little further down at a time of 3 plus 30, I want to change all three of those numbers for the VERB 49 maneuver to the following: roll 104.60. Pitch 078.90. Yaw 305.90. Go ahead.

ACDR Roger. Roll 104.60, pitch 078.90, yaw 305.90, over.

CC-H That's right. Okay, right below that is a time, I want to change the time of 5 plus 50. Delete that and change it to read 4 plus 18.

ACDR 4 plus 18 instead of 5 plus 50. Got it.

CC-H Okay. The next line down I want to change the time of 6 plus 50 to read 5 plus 18 and then I want to change the roll number to read 107.60.

ACDR Roger. 6 50 change to 5 plus 18 roll, now new number 107.60.

CC-H Okay. And also there under the data column under the notes, I want you to write in x-ray ops. We want you do to an x-ray ops there at 5 plus 18.

ACDR Okay. I guess that you basically will tell us when to turn it ON, (garble).

CC-H It turns - it turns out on this one that we're going to leave it on the rest of the pass. They claim if we need to turn it off I will call you.

CC-H Okay, the next change Tom, is the next line down. Change the time of 9 plus 05 to read 12 plus 33. And change the roll to read 110.60, over.

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ACDR Roger. Time to 12 plus 33110.60.
CC-H Okay. Now, next 2 lines the entry for 10 plus 20, I want you to delete that and delete the 135.90 and the next line down delete the 12 plus 35 and delete the 132 plus 90.

ACDR Okay. Let me get that again. It's 12 plus 33, the roll angle is 10.66 delete the next two lines which is 135.90 and 132.90, over.

CC-H Okay. One correction, back up there at the time of 12 plus 33, the roll angle is the following: 110.60, 110.6.

ACDR Roger. 110.60, the next two rolls are delete do, Over.

CC-H That's correct. You got it right. Okay, one more change at a time of 13 plus 50 in the yaw column change it to read 000.00.

ACDR Roger. The yaw column is now back to 000.00 at 13.50.

CC-H Okay, Tom. Now let me go back up to the manual roll up there to 46 minutes and make - give you a comment about that. The middle gimble angle you're going to have to monitor because it is going to get kind of high and if you will improve your - in other words if you start your VERB 49 maneuver just as soon as you're through with the Earth obs, the middle gimble angle will be not more than about 65 degrees. The longer you delay for that VERB 49 maneuver the higher it will get. But at any rate, watch it closely.

ACDR Roger.

CC-H Okay. We're about 1 minute from LOS Hawaii. That was kind of a busy first pass. We'll be seeing you coming up here at Bermuda in about another 15 minutes and I'll call you then.

ACDR All right. And real good. Are the ATS angles the same, because the last time we used our computer angles to lock on, the book was wrong. Over.

CC-H Stand by just a second. Tom, these ATS angles are correct.

ACDR Real good, thank you.

CC-H Okay. See you later.

ACDR Hey, one thing is the anominal time counting up at 177:58:36 over.

CC-H That's affirmative. It was less than 1 second off, Tom, and we've decided not to change it.

ACDR Oh, real good, thank you.

CC-H See you later.

PAO Apollo control, ground elapsed time 177 hours 34 minutes. We've had loss of signal through Hawaii. Next acquisition will be the Newfoundland tracking station in 14 minutes we anticipate the start of the change of shift briefing with flight director Frank Littleton, science officer Skip Larson and cap comm Bob Crippen. To begin momentarily in the main auditorium of building 2. If the change of shift briefing begins before our next contact we will record the air-to-ground and play it at the close of the change of shift. At ground elapsed time of 177 hours and 35 minutes, this is Apollo control.

END OF TAPE

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PAO Apollo Control. Ground elapsed time 178 hours and 8 minutes. We have accumulated 2 minutes and 40 seconds of air-to-ground during the change-of-shift briefing. We'll play that tape now, then bring the line up live during the ATS-6 pass.

CC-H Apollo, Houston. We think we can get locked up on ATS if you go to REACQ in NARROW.

ACDR Hello, Houston, Apollo.

CC-H Hello Tom. Loud and clear.

CC-H Apollo, Houston, through the satellite. How do you read?

ACDR Reading you loud and clear. And the helium glow and the EUV ops are coming on.

CC-H Okay. Real fine, Tom. It took us a second to get locked up there, but I'm reading you loud and clear. Looks like you're doing fine.

ACDR We want to trim our attitude a little bit. It's drifted out since we got there.

CC-H Tom. We think this one is okay. There's one of the later ones that's going to be real critical, and it's that one down at 4 plus 18, but we'll be watching it with you down there.

ACDR Okay.

CC-H No harm done.

ACDR I was just trying to get it right on.

CC-H Rog. We appreciate it.

ACDR Houston, Apollo.

CC-H Go ahead, Tom.

ACDR Okay. Looking down in the checklist here, for the next roll angle, I have 110.6 degrees. I copied that down at 10 plus 33. Is that right?

CC-H It's - the correct time in 12 plus 33. 12 plus 33, and I thought you read that back to me, but maybe not. At any rate, whether you did or not, it's 12 plus 33.

ACDR Okay. Got it. Yeah, I couldn't read my writing there. I was writing rather fast. I got it now.

CC-H Okay. Incidentally, while we've got a second, a breather here in the pad, there is no update to the light flash pad on the next page. That time is nominal.

ACDR Okay. The light flash is nominal.

CC-H Okay.

PAO Apollo Control. Ground elapsed time 178 hours and 11 minutes. We are now live as Apollo is in its 109th revolution in the central Atlantic.

END OF TAPE

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ACDR Houston, Apollo.

CC-H Go ahead, Tom.

ACDR I just wondered how everything's going.

CC-H It couldn't be going better. We've been following you going through this pad. And it's going real fine and that new star that we - or that new target that we stuck in the middle there. We got good x-ray data and good EUV data on it.

ACDR Hey, that sounds great. Thank you.

ACDR Sounds like the x-ray's working better then, huh?

CC-H Well, it - it ran all the way through that particular target, which was the one they wanted. After that we started getting poor data and we just decided not to bug you and we would or we're planning on just powering it down into normal time for the - for the pass. But it did it's job for the target we wanted.

ACDR Okay.

CC-H Apollo, Houston. If you would, on panel 230, we'd like to close the x-ray cover. So we want to leave the high voltage power ON.

ACDR Roger. Close the cover, but leave the high voltage power on. Okay.

CC-H Okay. Thanks, Tom.

ACDR Okay. She's closed.

CC-H Okay. Tom, thank you. The - turn out the data change there for a minute and we wanted to take a look at the background data by leaving the high voltage on and the cover closed. So, experiments officer's looking at it now.

ACDR Okay.

CC-H Apollo, Houston. It's possible that we may lose the ATS high gain. If we do, the INCO will be commanding on the DSC to get the data so you don't have to worry about it. I would like to change one thing and that is that at the end of the pad we do not want you to power down to x-ray. We want you to leave it in it's present configuration with the high voltage power ON and the cover closed and we're going to look at that data for a while longer.

ACDR Roger. Got it. So, I don't have to command that DSC. So, I just verify DSC tape motion. You want me to go at the very end then to low bit rate command, reset it or forget it? Over.

CC-H Stand by. Let me check.

CC-H Tom, Houston. Affirmative. Just do exactly as the pad says there at the end on the DSC.

ACDR Okay. The low bit rate, command reset. Thank you.

CC-H That's affirm.

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ACDR Crip, we don't have any tape motion over there, it looks like.

CC-H Okay.

ACDR Dick (garble) - -

CC-H Yeah. Yeah, I understand. Yeah, stand by please.

CC-H Tom, Houston. We're about to start it now. We do have a good lock up on the ATS and that's the reason we were delaying a little bit but you ought to be able to verify it here very shortly.

ACDR Okay, real good, Dick.

CC-H Apollo, Houston. Looks like we prob - we may very well keep the ATS for the rest of this pass, but just in the event we don't - Bermuda - we've got a good long LOS here. Bermuda comes up at 179 plus 21. And this was the - the last of the complicated experiments pads and I don't see how it could have gone more perfectly. Looks like a real good show.

ACDR Ah, thank you very much. And also thank you guys on the ground because you really helped to pull us through here on an occasional mistake on the DSKY (garble) something else, and also on this good coordination. Thank you.

CC-H Well, I was looking hard to catch a mistake that time but I sure didn't see one. And also like to pass to Deke, again from the surgeons - I heard Crip talk about it while ago - that they get extremely good data and have an excellent current status, and recommend the same procedure for applying the sensor for re-entry. And it was - that's from Peter Whittingham, our Royal Air Force flight surgeon here and he says, "Good show chap."

ACDR Okay, thank you.

CC-H Apollo, Houston. Now that you've started that last maneuver, Tom, I'd like to talk to you a little bit about the water level, and what we can do on the secondary evaporator.

ACDR Go ahead, Dick.

CC-H Okay, it turns out that we've got a choice, Tom, and we've done a little bit of talking about it here in the last 10 minutes. If you activate the secondary evaporator, which is in the flight plan coming up here right after this pass at 178 plus 50, you can leave it on just about all the way to bedtime and then turn it off, and that will allow us to sleep with it off, but then it will - we - it will put us in a situation where we can probably turn it on in the morning. And then you'll have cooling just about all the way for the rest of the mission. It'll help us- -

ACDR Okay.

CC-H It'll help us in one more way, and that is we are gonna do some SIM BAY experiments taking data all night tonight, and it'll help a little bit not to be dumping that water overboard. You do have another choice though, you can leave the secondary off now and turn it on right at bed time and let it cool all night. But - but if you do

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that we probably will have to turn it off first thing in the morning and spend most of today with it off. I'm not sure - we're not sure exactly what kind of situation we'd be in then at the end of tomorrow afternoon.

ACDR Okay, so you say basically if we leave it off now, we can have it starting tomorrow morning on, huh?

CC-H No, what I'm saying is now you can turn it on per the flight plan, other words activate it there where it says activate primary evap, just activate the secondary instead of the primary, and let it cool down the spacecraft for the rest of this evening, and then we'll deactivate it when you go to bed, and then you'll have - be all set in the morning to reactivate it and just leave it on.

ACDR Okay, real good, sounds great.

CC-H And - and our data shows - that should cool the spacecraft down real good this afternoon and about bedtime should be real comfortable.

ACDR Real good, thank you.

CC-H Okay.

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CC-H Apollo, Houston. We're coming up on 2 minutes to
ATS LOS. Bermuda comes up at 179:21.

ACDR Oh, roger. Dick, glad your run went real good
(garble).

CC-H Boy, that was super, Tom. I assume that Vance and
Deke didn't go EVA or something. I haven't talked to anybody but you
since I got here. They didn't abandon ship, did they?

ACDR No. What we're doing is trying to get ahead of it
and we're already setting up the light flash experiment. Those two been
working on it full time.

CC-H Roger. Sounds good.

CMP This is obs data talking.

CC-H Okay.

CC-H Well, we'll see you at Bermuda.

ACDR Okay.

PAO Apollo Control. Ground elapsed time 178 hours and
41 minutes. We've had loss of signal through the ATS 6 applied tech-
nology satellite. Next acquisition will be through Bermuda in 39 min-
utes and 23 seconds. CAP COMM, Dick Truly, passing on to the crew that
the previous pass - previous revolution was a good science pass. And
the ground has received extremely good data. And also reporting that
flight surgeon, Peter Wittingham, reported that Deke Slayton's exercise
period produced good data here on the ground. And he passed up a "Good
show, chap," to the docking module pilot, Deke Slayton. Peter Wittingham
is one of the RAF, Royal Air Force officers on loan to the Johnson Space
Center to NASA here for the ASTP mission. Here at the Mission Control Center
Farouk El Baz, one of the principal investigators for the Earth observa-
tion experiment, reports that he is very happy with the results so far
in the Earth observation portion of the mission. He said unlike Skylab,
Apollo has had very specific targets where the crew has been asked
to answer very specific questions and the questions are based on know-
ledge developed over previous Apollo and Skylab missions. He commented
on the fact that the crew has been asked to observe possible farming
areas, sea farming areas in two portions of the Earth. One in the
Adriatic Sea. And the second in the Straits of Georgia, which lie
between Vancouver and Canada. And also in south of Cuba in the Carib-
bean Sea. The Earth observation program to this point, according to
Dr. Farouk El Baz, has produced more detail. A great deal of information
which should be very valuable to the scientists here on the ground.
Next acquisition in 37 minutes and 25 seconds through Bermuda. At
ground elapsed time of 178 hours and 44 minutes, this is Apollo Control.

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Time: 18:43 CDT, 179:21 GET
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PAO Apollo control, ground elapsed time 179 hours, 21 minutes. Acquisition coming through the Bermuda tracking station. In about 20 minutes from now commander Tom Stafford will be performing - will be conducting his exercise period for the day while docking module pilot Deke Slayton terminates the electrophoresis experiment. We'll bring the line up for cap comm Dick Truly. Flight director is Neil Hutchinson.

CC-H Apollo, Houston, Bermuda for 7 minutes.

ACDR Okay, Dick. Got you.

ACDR (Garble)

CC-H Apollo, Houston. Not much going on down here. I had a couple of comments for you. One was on film budgeting and also a minor deletion in the flight plan later on at 183 hours or so.

DMP Okay. How much time have we got here, Dick?

CC-H We've got about 3 minutes and neither one of these comments need to be done for the next several hours, Deke, so if you're busy I'll be glad to wait. No problem.

DMP Okay. Well EC(?) is up for his morning constitutional and CP's here on some other stuff and everybody's off drive and I'm terminating EPE here so you can hold off that would be great, if we can't I'll get it though.

CC-H We can hold off for as long as we need to. No problem.

DMP Okay, great. Thank you.

CC-H Apollo, Houston, we're one minute until LOS. Ascension comes up at 159 plus 39 and Deke, when you get a chance on panel 230 we'd like x-ray high voltage power to OFF and leave the low voltage power ON.

DMP Okay. High voltage power OFF.

CC-H Okay. See you at Ascension.

DMP Okay. Thank you.

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CC-H Apollo, Houston. Ascension for 4 minutes.
ACDR Okay, Dick.
DMP Okay. Dick, in regard to the (garble) minute has
some sort of (garble) got time to do it.
CC-H I'm sorry, Deke. You were real low. Say again,
please.
DMP Say we're in the (garble). If you got something that
you want to read up, I got time to do it.
CC-H Okay. Real fine. One note from - from Farouk
and that was - has to do with film usage. If you want us to get into
the act on planning film usage, if you would let us - sometime, any-
time you have a chance, if you'd go through the - the unused and par-
tially used mags for both the silver and black cameras and tell us
how many frames are in vail - are available per mag. We'll be glad to
help you. If you think you've got a handle on it, don't worry about that.
And also, if you'll turn in the flight plan to 183 hours, I've got a
couple of simple updates for you. And incidentally - -
DMP First - -
CC-H I'm sorry. Go ahead.
DMP First film, pretty good inventory on that, but I
think we know where we're at pretty much on that subject. So
thank you.
CC-H Okay, Deke. And we're about 30 seconds to LOS.
Guam comes up about 40 minutes from now at 181 - 180 plus
21, in case we don't get these readups here.
DMP Okay. We're still standing by, 183?
CC-H Okay. Then in the DP column at 183 plus 20. I
want you to delete x-ray from that ops there. And down below that,
also delete, - remove the cabin vents 2D and stow it, we're going to
need it tomorrow. We are going to do another purge and we'll be seeing
you on the ATS.
DMP Okay. Okay. You say you will not do a purge any-
more - anymore purging today. Right?
CC-H We - we are going to do it tonight, but we do not
want you to remove that vent QD and stow it. We want you to keep it
out because we're going to use it tomorrow. And also, delete the x-ray
ops.
DMP Got it.
CC-H And we'll see you when we get locked up on the ATS.
DMP Okay.

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CC-H Apollo, Houston. Through the satellite, how do
you read?
CC-H Apollo, Houston. Do you read?
CC-H Apollo, Houston. In the blind if you read, we
need to go back to P20 instead of P00 after that P56.
CC-H Apollo, Houston. In the blind, if you read we need
to go back to P20 instead of P00.
DMP Houston, Apollo.
DMP Houston, Apollo.
CC-H Apollo, Houston. Deke, we - I read you now and we
need to reselect P20, Deke, per the flight plan there at - following P52.
DMP Houston, Apollo. How do you read?
CC-H Apollo, Houston. Deke, I read you very weak. I'm
not sure I'm getting up.
CC-H Apollo, Houston. Deke, do you read?

END OF TAPE

ASTP (USA) MC598/1
Time: 19:29 CDT, 180:07 GET
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PAO Apollo Control ground elapsed time 180 hours, and 18 minutes. We've had loss of signal through the ATS-6 satellite. The spacecraft not locked - antenna not locked on to the ATS-6. Therefore we have had a lot of noise during this pass. Next acquisition will be through Guam in 2 minutes, and 20 seconds. A reminder about tomorrow morning's live press conference with the crew of Apollo, it's requested that news media will be in the auditorium, main auditorium building 2 by 7:20 a.m., which is 10 minutes before the start of the press conference. It's requested that the news media sit - be seated side by side in order that we fill the space in the auditorium, and to permit easier handling of the microphones. Media should be - wait to be recognized by the moderator tomorrow morning, and wait for the microphone before ask - questioning the crew. Whenever possible the moderator will identify the individual being recognized by name, and media affiliation. Media will be allowed one question to provide greater individual access to the crew - follow - follow up questions can not be permitted because of limited time. Media questions should be addressed to a specific crew member, avoiding questions requiring a response from more than one crew member. When asking questions, media should speak slowly and phrase wording so it is clear when the astronauts should respond. We will have acquisition through Guam in 57 seconds. Flight Director is Neil Hutchinson, chief of the silver team. CAP COMM is astronaut Dick Truly. Acquisition in 45 seconds. We'll hold the line up for this Guam pass.

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CC-H Apollo, Houston at Guam for six minutes and on panel 230 we need UP TELEMETRY to DIRECT.

DMP We've got everybody in position here for a good old Earth ops.

CC-H Okay, Deke. The reason that we missed that ATS pass I think is after the P52 we needed to go back to P20 instead of back to P00 so what I need to ask you to do is go back to the flight plan at about 178 hours and 45 minutes and call up and do those procedures there that recall P20 and that'll get us back the attitude and we'll be all set.

DMP Okay. We're in the process of putting back the attitude now, Dick. And we're doing a 52.

DMP Still with us, Dick?

CC-H Yes. Affirmative, I am with you. We got intermittent data there during the ATS so we didn't - we never did get it good enough to get voice.

DMP Okay. Well, we're in the process of maneuvering back to attitude here right now.

CC-H Okay. Real fine, and Deke, anytime you want to read me down the P52 data, that's fine. If you don't want to do it now - I can get it later.

CMP Okay. We're just trying to get cranking here on this light flash thing so stand by a minute.

CC-H Okay.

CC-H And Apollo, Houston. Then on panel 230 we need UP TELEMETRY to DIRECT.

DMP UP TELEMETRY, DIRECT.

CC-H That's affirmed Deke, and Deke, if you have time before we get this light flash experiment started, we have about 3 more minutes here at Guam. I need to read you a correction to that next VERB 49 maneuver down on the next page at 182 hours and 15 minutes and that follows the light flash experiment.

DMP You're going to have to - we're already into this thing and I'm having a little trouble doing everything here myself. Crawling over people and etcetera so stand by one.

CC-H Okay. We got several more passes before it happens. I didn't realize that the guys had started yet. I thought they were (garble).

CC-H Apollo, Houston. One minute till LOS Rosman at 180 plus 52.

DMP 180:52. Do you have anything critical to give us, I can take it now.

CC-H Well, if it's handy Deke, in the flight plan at 182 hours and 15 minutes I want to change that next VERB 49 maneuver, that's 182 plus 15.

DMP Okay, go ahead.

CC-H Okay. I want to change the VERB 49 angles to 052, 023, and 312.

CMP 052, 023, and 312.

CC-H Okay. While you're right there, down to the left I

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want to change the high gain angles there to pitch of minus 29 and yaw of 279 and - and could you confirm that you got the UP TELEMETRY switch on 230 to DIRECT?

DMP Well, I'll have to go and reaffirm it.

CC-H Okay.

DMP We're all blacked out in here so it's difficult to see anything.

CC-H Roger. Understand. We'll be seeing you at Rosman.

PAO Apollo control, ground elapsed time 180 hours, 28 minutes with loss of signal through Guam. Next acquisition Rosman in 23 minutes and 10 seconds. Deke Slayton's reference to the spacecraft being dark is in preparation for the light flash experiment which will be performed on this revolution by Apollo commander Tom Stafford and Vance Brand, the command module pilot. This experiment, the light flash experiment MA106 is to correlate astronaut observed light flashes, in an instrument light-tight mask which they are presently donning. They have a period of about 20 minutes in which to adapt themselves to the darkness of the spacecraft. The experiment is to determine the efficiency of detection of charged particles such as galactic cosmic primary that penetrate the atmosphere and geomagnetic Earth shields sufficiently to interact with the central nervous system of the crew when into selected sectors of the orbit. They will be conducting this experiment for the next hour and a half. Each crewmember wearing a light mask over their eyes. This is an experiment which has been conducted on previous Apollo experiments. The experiment is designed to ascertain at what frequency cosmic rays can be detected by the crew and also what is the latitude dependents of this phenomenon, and to ascertain if there are any other sensory phenomena from the particles that do in fact interact with other sensory tissue. Next acquisition through Rosman in 21 minutes and 35 seconds at ground elapsed time 180 hours and 30 minutes, this is Apollo control.

END OF TAPE

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PAO Apollo Control. Ground elapsed time 180 hours, 51 minutes. We'll have acquisition in 25 seconds through Rosman.
CC-H Apollo, Houston. Rosman for 4 minutes.
ACDR Okay. Dick, we're with you.
CC-H Okay.
ACDR Okay. MARK it. Got a small star in both right, followed by one in the left, in my left eye. Right on the center line in my left eye, horizontal.
DMP Incidentally, Dick. We're running with - both left and right-hand couches here in the vox mode her checklist. I don't really understand that, but we're doing it anyway.
CC-H Okay. It'll probably help us on the ground monitor you in any way. And, Deke, if you get a chance, on panel 230, we'd like the UP telemetry switch back up to telemetry, center.
DMP Thank you.
CMP Okay. I got two events. In the upper right I got a - comet and - -
ACDR I've got - had a long streak at the very top of my left eye, a long streak. There's a little blast of a star in - flat in the center of my left eye.
DMP Is that UP telemetry you wanted, Dick?
CC-H That's affirm, Deke. UP TELEMETRY. That's the center position.
CMP IT the middle.
CMP Are there terms other than hotdog?
CMP Okay. Okay. I wonder if it's getting recorded then.
CMP Okay. I'll try to hold the mike closer. Okay.
Review of some of the terms again. There's streak blocks, streak hotdogs, star, cloud, double (garble). Okay. Okay. I got a star just then, upper left. Tadpole.
ACDR (Garble) left to eye, upper left corner.
CMP That's the word I was trying to think of.
CMP Maybe we ought to boost her to a higher orbit (garble).
CC-H Apollo, Houston. We're 1 minute to LOS and we'll see you when you get locked up on the ATS, Deke, at 130 - 181 plus 35.
CMP One streak over in the right corner.
PAO Apollo Control. Ground elapsed time 181 hours, zero minutes. This pass - conversations overheard between Tom Stafford and Vance Brand, describing the light flashes they see as they're wearing more or less blinders over their eyes to keep out the light. The spacecraft is totally darkened however. While Deke Slayton records their comments on a special device aboard the spacecraft. Due to the orientation of the vehicle to perform this experiment, we will not have a lockon to the ATS 6 satellite during this experiment performance. Next acquisition will be at a ground elapsed time of 181:35 or 34 minutes from this time. At ground elapsed time of 181 hours and 1 minute, this is Apollo Control.

END OF TAPE

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CC-H (Garble).
CC-H Apollo, Houston. It turns out in this attitude,
that we are picking up some low bit rate data on the ATS and just wanted
to remind you you're on vox.

END OF TAPE

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PAO Apollo Control. Ground elapsed time 181 hours and 34 minutes. We anticipate acquisition through the ATS-6 satellite as the crew concludes the Light Flash experiment, reorien the spacecraft and aims its antennas at the ATS6 satellite. We'll bring the line up for CAP COMM Dick - Dick Truly. Flight director here at the mission operations control room is Neil Hutchinson.

USA How do you read through ATS?
CC-H Apollo, Houston. Through the satellite.
USA Houston, Apollo. How do you read through ATS?
CC-H Apollo, Houston. I read you but very weak.
USA A star, right eye lower(?) part.
ACDR Okay, we read you fine, Dick.
USA Very large star, right eye left side.
DMP We heard about 50, or 60 percent signal there, then
it didn't come up so we tweaked it a little and got it to 30.
CC-H Okay, I'm reading you loud and clear now, Deke.
DMP Okay.
USA (Garble) center, top of right eye.

END OF TAPE

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DMP (garble) pretty quiet through the old SAA.
CC-H Did you understand that things were quiet going through
the SAA?
DMP Yeah, not many sightings reported.
CC-H Roger. Understand.
CMP Okay.
USA (Garble) (Laughter)
DMP Say, Dick, I guess I never gave that last 52 did
we?
CMP He had a burn (garble) - -
CC-H No - Deke, you didn't, but we're not in a big
hurry, if you want to we can just wait until this light flash experiment
is over, and - we can get it then.
DMP Okay.
CC-H Incidentally let me clarify - O understand - before
what you told me that there were no sightings in the south Atlantic, and
nominally a couple of people thought you said maybe it was since the South
Atlantic Anomaly.
ACDR Okay, had a big bright tadpole left - lower quadrant,
left eye.
DMP No, you heard me right, Dick. It was through what
the flight plan at least shows - the SAA, - very few sightings.
CC-H Okay, while we're talking about it I had one more
question here to ask the guys, did - did they notice any hazy brightening
of the background during that south Atlantic anomaly pass?
Or at any time during the start of the experiment?
ACDR No, I didn't notice any. I guess I just didn't
notice any, we saw sightings, but I guess we were expecting them to happen
one after another and we didn't have it.
CC-H Roger. Understand.
CMP I didn't notice any brightening either.
CC-H Okay, thanks Vance.
CMP (Garble) track one mark button just now - I pressed
the button to talk. (Laughter)
DMP Is that 02?
DMP There seemed to be a (garble), Dick, just coming out
of the SAA, just about that time.
CC-H Roger. Understand.
CMP Now that we're knee deep in Kleenex, - -
DMP Dick, I think it's pretty quiet. I can start giving
you the 52, and I'll just break on our - if they see anything outside.
CC-H Okay, suits me fine, go ahead, I'm ready to copy.
CMP Bright (garble) stars, center.
DMP Okay, NOUN 71 is 35.36. NOUN 05, zero. NOUN 93:
X, plus 92; Y minus 79, Z, minus 1. GET, 179:56:55.
CC-H Okay, Deke, copy. Thanks a lot.
DMP (Garble)
CMP (Garble)
DMP Say, Dick for whatever it's worth to the PI, it's
my recollection that - most flashes were reported shortly after we

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started. Like right around (garble) - 181 GET.

CC-H Okay, Deke, - Go ahead.

DMP Yeah, I was just guesstimating that probably we're
in a - -

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CC-H - - Deke, go ahead.
DMP I was just guesstimating that probably we're in
kind of a (garble) attitude and probably the same that was on the
(garble. You guys can take that better than we can.
CC-H Roger. We'll - thanks for the input and we'll
get it all coordinated to the latitude when we get the tapes back.
DMP Sure.
CC-H Apollo, Houston. We're a couple of minutes from
ATS - LOS Goldstone at 182:18.
DMP Roger, 182:18.
SPKR Yeah.
PAO Ap - Apollo Control. Ground elapsed time 182 hours,
49 seconds. Loss of signal through the ATS 6 satellite. Next acqui-
sition will be Goldstone tracking station in 17 minutes and 9 seconds.
As the crew commander, Tom Stafford, and Vance Brand conclude the light
flash experiment, which has been conducted since - for the last hour
and a half. They - next on the schedule for tonight is an eat period
beginning in approximately 20 minutes from now. Their sleep period
will begin this evening at 184 hours, with wakeup scheduled at 6:20
a.m., central daylight time, Wednesday morning. Acquisition through
Goldstone in 16 minutes and 33 seconds. At ground elapsed time of
182 hours and 1 minute, this is Apollo Control.

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PAO Apollo Control. Ground elapsed time 182 hours, 17 minutes. Acquisition coming through the Goldstone tracking station in 45 seconds. As Apollo concludes revolution 111, the crew will be in their eat period for the evening. Sleep period - a 7 hour sleep period began at 184 hours.

CC-H Apollo, Houston. Goldstone for 6 minutes.

DMP Okay, Dick, fine. And we just completed the Light Flash and we're taking some photos here before we (barble).

CC-H Okay, Deke. I understand you completed the Light Flash and you were very weak. I didn't catch the rest.

DMP We're going to take a couple Nikons and the set up here before we turn down(?).

CC-H Oh, okay, fine.

DMP I've sure been getting a rash of O2 warnings here.

CC-H Roger. Incidentally, Deke, just for y'all's information, the reason we changed that VERB 49 maneuver that you are in the process of going to now, was to point the EUV while you sleep at a particular star. It's - will not change the ATS coverage during the night.

DMP Okay, thank you. Anything else we can do for you? We're now all available. (Garble)

CC-H Well, why don't you just clean up the Light Flash and get yourselves a good meal.

DMP (GARBLE)

ACDR Let me give the then a call - -

CC-H Apollo, Houston. Tom, did you call ?

ACDR Yeah, got off VOX THERE. Look we've been talking, Dick, about tomorrow morning, the press conference and the wakeup and get ready, why don't - why don't you wake us up at least 30 minutes earlier then because there's no way we can get up and get things squared away and shave and get squared away for that press conference in that period of time. Over.

CC-H Okay, Tom, let me - looks like we'll be having an ATS pass during that whole time so it probably would be easy for us to wake you up. Oh, I take it back here, we - there is an Ascension pass that's about 20 minutes early. And as a matter of fact there's a Santiago pass that's about 32 or 33 minutes early. Maybe - it's a real short one, but maybe we could give you a call right there at Santiago, 30 minutes early.

CMP Hell, I won't even be awake by- -

ACDR Yes, why don't you give us a call at Santiago.

CC-H Okay. Okay, Tom, we'll sure do that.

CC-H Apollo, Houston. We're one minute form LOS Quito at 182 plus 31.

PAO Apollo, Control. Ground elapsed time 182 hours, 24 minutes. Commander Tom Stafford requesting an early wakeup call for the morning so the crew would be ready - have enough time to get ready for the - tomorrow morning's live press conference. Discussions

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here at the mission control center to move that wakeup time back about 45 minutes. Next acquisition will be through Quito, Ecuador. At ground elapsed time of 182 hours and 24 minutes, this is Skylab - Apollo Control.

END OF TAPE