ASTP (USA) MC114/1
Time: 10:09 CDT, 26:49 GET
7/16/75

ACDR Hello, Houston, Apollo.
CC-H Go ahead, Tom.
ACDR Yeah, Dick. We've got a question here. Can we have the - that filter on for the launch on TV?
CC-H Yeah.
ACDR Okay do we - and that's the only filter we've got and I guess - we could come on along here to deactivate that? I mean, all those - forget those TV preps - just take the filter off and stow it. Right?
CC-H Let me check, Tom; I'll be right back to you.
CC-H Apollo, Houston. Tom, that's affirmative. The filter is to be taken off the camera and stowed in U2 - it - for later particular set-ups using that particular bracket. You'll need it again, so be sure and just don't throw it away. Put it in U2 so it can be found again.
ACDR Roger, Houston.
CC-H Okay.
CC-H And Tom, I didn't say it but the same goes for the polarizing filters on those little lights also. Just take them all off, stick them together and put them in U2.
ACDR All right, Dick. Sure.

END OF TAPE

ASTP (USA) MC115/1
Time: 10:23 CDT, 27:03 GET
7/16/75

MCC-H Apollo, Houston. Just so you don't forget us, we're still here. We still got about 10 minutes left in the ATS pass.

ACDR Roger. We're trying to catch up here, because of all the problems we had with the probe and everything.

CMP We've got all our TV's set up and they should be running and we're now going to start working towards the DM.

MCC-H Okay. Real fine. We'll - go ahead and go to a downlink TV mode and get a little television and stay out of your hair. We still have about 8 and a half minutes at this ATS pass, so I'm standing by.

END OF TAPE

ASTP(USA) MC116/1
Time: 10:29 CDT, 27:09 GET
7/16/75

CMP Houston, Apollo.
CC-H Go ahead, Vance.
CMP Okay. A question about the zone-forming fungi.
CC-H Okay, shoot.
CMP Of course, when we take pictures, the covers are open; the rest of the time, should the covers be closed or open? Just in between pictures.
CC-H Okay. Stand by a second, I'll get you an answer, Vance.
CMP Right.
CC-H Vance, we'd like the covers closed in between the picture taking session.
CMP Okay, so we thought; thank you.
CC-H Okay.
CC-H Apollo, Houston. We're two minutes from LOS of the satellite; I'll be giving you a call down at Orroral Valley at 27:24 and we'll check your status in the checklist then. so we'll see you then.
CMP Roger. Understand.
CC-H Incidentally, Vance. We have been downlinking TV and we've got a picture from both TV stations; it's looks like the one that's pointing at the main display console may be a hair out of focus, but other than that good pictures.
CMP Okay. We'll check it; see if you can get a better focus.
CC-H Okay. No problem.
PAO This is Apollo Control. Loss of signal from - -

END OF TAPE

ASTP (USA) MC117/1
Time: 10:39 CDT, 27:19 GET
7/16/75

PAO This is Apollo Control. Loss of signal from ATS-6 satellite. 41 minutes until reacquisition. A long LOS period here. We have some 10 minutes of tape that have been recorded during the change of shift briefing and - which overlap the first part of this ATS-6 pass. During this 10 minutes, the crew was successful - Vance Brand, particularly - in getting the docking probe problem settled and the pyrotechnic connector moved out of the way, so that the release tool could be operated to release the capture latches. And we'll listen to that 10 minutes of tape at this time.

USA Hello, Houston.

CC-H Apollo, Houston. Hello at Santiago, for 4 minutes.

ACDR Hello, Dick. How do you read us?

CC-H Loud and clear, Tom. How me?

ACDR Okay. Vance is working on taking this baseplate off of the probe, and it is really going rough. The screws were - he's got the 3 screws bursted loose. But it seems like it takes tremendous torque And he hasn't got the base plate off.

CMP Okay. But I just found out something new here, Crip. It doesn't look like I'll have to take the base plate off. I'm leaving the cover on, right now. And, through the side, I've been able to get the pyro connector with the orange dot off. And now I'm working on the one that's in the way, which - I think I'll be able to get out - get off - without removing the pyro terminal. The one that's in the way is also orange.

CC-H Okay. Stand by just 1 second, Vance. I think we've had a slight misunderstanding in communications. But let me get right back to you. Hang on.

CMP To say that another way, I guess the one - I've just removed the connector with an orange dot, which is in the way of the connector I have to get at. And that's the connector with a red dot.

CC-H Okay, Vance. I think we may have misled you a little bit. What we had wanted you, originally, to do was not remove the 3 Phillips-head screws in the top of the pyro cover, but down on the side of the pyro cover - down at the base - there's a little flange with a little hex nut end - that you need W - tool W and tool 1. And if you just remove that 1 hex nut and then press on the cover, the whole cover'll come off in your hand. And then you can get directly down at the connectors.

CMP Okay. Very good. We got the hex nut off. But - I guess I just didn't press hard enough to get it off, and I thought - (garble) cover off.

CC-H Yeah. If - Yeah, when you get it off, you'll see why. But you do have to reach down to the sides, there. Just - and squeeze real hard. And there're just 2 little bitty metal flanges there that'll hold it, and - on - and what - when you do squeeze it, it should just come right off in your hands. And it may take 2 hands.

ASTP (USA) MC117/2
Time: 10:39 CDT, 27:19 GET
7/16/75

CMP Okay. It's off.
CC-H Hey, super! Good.
CMP Okay, we have the offending connectors off, too, now. And I think we're in good shape now. It's just a matter of going back through the removal procedure and taking this thing off. And we can put connectors back together once we get the probe out. I'm worried about -
CC-H Okay. Just a second, Vance. We're about 45 seconds from LOS at Santiago. The high-gain angles are good, so we'll be talking to you on the ATS here, in just a second. We had intended for you to - after you got the pyro cover - to go ahead, remove the offending connector, and either reinstall it so it doesn't cover the tool place, or tape it out of the way, install the other connectors, then reinstall the pyro cover, and then - now, we ought to be back to nominal, and you can go through the procedures to get the probe out.
CMP Okay. The only thing that bothers me is - I'm not sure there's any place to put that red connector easily, so that it won't be in the way. But I'll try it.
CC-H Okay.
CC-H Apollo, Houston. Talking to you through the ATS. How do you read?
CC-H Apollo, Houston. Through the satellite.
DMP Rog. Go ahead, Dick.
CC-H Just letting you know we're locked up, Deke. And I read you loud and clear. How you doing?
DMP Okay. Fine. Just starting fuel cell purge here.
CMP Okay, Dick. Another progress report.
CC-H Okay.
CMP I'm putting the cap back on. I think we're all squared away, now. I could not get the red connector back on without having it interfere. So I've left it disconnected. The other 3 connectors are connected.
DMP Do you want to know where that connector is?
CMP It - looks to me like - all we have to do is put the screw on to lock down this cap where it's Fat City. The reason you can't get that connector connected without having it interfere is the fact that it's on a wire that's too short.
CC-H Uh huh. Well, I tell you what - just for our curiosity, why don't you describe how you got it out of the way underneath the cap and - and then, we're happy that it's out of the way and not connected.
CMP Okay. I - the pressure release button is going to be my reference point, here. I've got it almost sitting on top of the pressure release - or, pressure relief button. And it's kind of cocked in there sideways. And I don't think it's going to do us any harm. What I could do, if it would help, is just let it dangle outside of the cap. That might be better.

ASTP (USA) MC117/3
Time: 10:39 CDT, 27:19 GET
7/16/75

CC-H Well, we wouldn't object with that. You might just get a piece of our old, friendly, gray tape and tape it to the outside of the cover. It's in R-6.

CMP Okay.

CC-H Whatever looks best to you, Vance. We just wanted to look - try to understand the configuration, so we'd know.

CMP Okay. It'll be outside of the cover and dangling. And we'll cap it off with some gray tape - tie it down.

CC-H Okay. Super. Just - as you keep working on it, if you'd keep us advised, we'd appreciate it. Incidentally, the biostack should be off by now. The only reason I'm reminding you is - we're having all this talk about the - and all this business about the probe, and - just didn't want to miss it.

CC-H Apollo, Houston. Vance, are you still listening?

CMP Rog. Go.

CC-H Yeah, Vance. We were sitting here, looking at the probe ourselves, and the only - in taping the connector out of the way, the only caution that we'd like to point out to you is that, when you do fold the probe, that connector and it's wiring - needs to be within the - well, at any rate, the - the probe cover is going to bury itself in - down in the probe, when the probe is folded, so that the connector and the wire's going to have to be sure and not be in the way, there.

CMP Okay, understand. And we'll watch for that. And that's a real good idea. You guys are really on top of this. You can see just what I'm looking at.

CC-H Yeah, I got one about 6 inches in front of my face, as a matter of fact.

CMP You'll know the back end of the probe very well after this exercise.

CC-H Oh, I wouldn't say that. But we'll try.

ACDR It wouldn't be a normal flight if we didn't have our little probe problems.

CC-H You're right, there.

DMP And - for future reference, Dick - if you think your TV is like looking through rose-colored glasses from now on, it's only because you're looking through strawberry-color.

CC-H Yeah. I heard that - I heard that comment that the - you had a strawberry-colored spacecraft. What I was wondering was, did you have a strawberry-colored DP, AC, or CP?

DMP One little lonely CP.

CC-H Uh huh. Okay.

DMP I'll swab this window off the best I can, and I think it's going to be all right.

CC-H Okay, Deke.

ACDR Dick, that makes 2 of those juice bag that have gone, mine went yesterday, my orange drink - but I was able to catch most of it.

ASTP (USA) MC117/4
Time: 10:39 CDT, 27:19 GET
7/16/75

CC-H Okay, Tom. I'm not sure what we can do, except - if you'll just let us know when it happened.

ACDR You'll have a beautiful, psychedelic-colored spacecraft when we get back.

CC-H Well, good. I'll watch for it on the TV. Hey, listen. One thing that I had meant to tell you just a second ago. We're having a problem - a little problem with the water level in the waste water tank. And one of the problems is - is that the secondary EVAP - the good news is, of course, is - is that it's keeping you cooler. But the bad news is - is that it sure likes heating up the water. So if you could stand to turn the secondary vent off and let us let the water level build up in the waste water tank - right now it's down to 20 per cent - it would help us out on those consumables management.

CMP And - we have a valve in 382 that we turn on and off every time that we turn on the secondary evaporator. Is it okay if we just leave that in AUTO all the time? I don't think you're afraid of any leaks down there, are you?

CC-H Okay, let me check.

ACDR The probe is out.

CC-H Hey, good, Tom.

ACDR (Garble.)

CC-H Thank you.

PAO This is Apollo Control. That completes playback of the first 10 minutes of the just-completed ATS-6 satellite pass, in which the crew of Apollo was successful in removing the bulky probe from the tunnel that connects the Apollo command module to the docking module. During the playback we had an additional pass of about a minute and a half of tape, over the Orroral Valley tracking station in Australia, which we'll play back at this time.

CC-H Apollo, Houston. Short pass at Orroral Valley for about 3 minutes. How do you read?

CMP Loud and clear, Crip.

CC-H Roger, Vance. How're ya'll doing?

CMP I estimate we're about 20 minutes behind the timeline - Deke's just -

END OF TAPE

ASTP (USA) MC118/1
Time: 10:50 CDT, 27:30 GET
7/16/75

CMP Loud and clear, Crip(sic).
MCC-H Roger, Vance. How are ya'll doing?
CMP I estimate we are about 20 minutes behind the time-line. Deke is just getting ready to go into the DM.
MCC-H Okay. Super.
CMP We just opened hatch 2.
MCC-H Okay. Thank you. Apollo, Houston. We are about 1 minute from LOS. We're going to have a short Santiago pass at 27:53 then we'll see you on the satellite. The high gain angles in the checklist are good.
CMP Okay. Very good, Dick.
MCC-H Okay, Vance. See you later.
PAO This is Apollo Control. That completes the playback of the Orroral Valley tracking station pass. Twentyeight minutes until reacquisition through ATS-6 satellite and Santiago, Chile overlapping coverage from those two stations. We'll return at that time. Vance Brand successful in removing the docking probe. Some problems there in getting the access cover off. The screws apparently were torqued down fairly tight and he had to wrestle with them using the ratchet wrench and in zero g apparently that is more of a problem than it is on earth. But they were successful in moving the connector to one side to allow the wrench to pass through the opening in the end of the probe to release the capture latches on the opposite end of the mechanism. Returning in 19 minutes. This is Apollo Control at 27:33 ground elapsed time.

END OF TAPE

ASTP (USA) MC119/1
Time: 11:12 CDT, 27:52 GET
7/16/75

PAO This is Apollo Control. 27:52 ground elapsed time. We're expecting acquisition through Santiago, Chile in 25 seconds. Continuous coverage except for a brief dropout until we come across the ATS-6 range satellite some 23 000 miles above Central Africa. Relaying the Soyuz and Apollo or the Apollo-Soyuz comm - communication back to the states and the ground tracking network. Santiago, Quito, and Orroral Valley are experiencing their first manned flight on this mission.

CC-H Houston, Santiago.

ACDR Roger. Go ahead.

CC-H Roger, Tom. I was just calling you just to let you know that we are here and to check on where you were in the checklist.

ACDR Okay. We are activating the docking module.

USA Page 1-4.

ACDR We're about 30 minutes behind.

CC-H Okay. When somebody gets a chance, you might pass down to me the time that the UVA lamp was be turned; ON that should probably be recorded in the flight plan - it was back on page 1-3.

ACDR Yea. It was turned on about 27:5 --

CMP We have it recorded.

ACDR Just log that, Vance, on the other page and give it to them there.

CMP Okay.

DMP 27:51:25

CC-H Apollo, Houston. Say it again please.

DMP 27:51:25.

CC-H Okay, Deke. Thank you very much. We are about 30 seconds from LOS. We will see you when you get locked up on the ATS. We thought of one thing that will probably would hasten the waste water tank filling up again and that is on panel 352 if anybody is left in the command module to close the potable water inlet valve. This will make sure that whatever water we do make goes into the waste tank.

DMP Okay. I'll do that in a minute.

CC-H Okay. No problem.

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

ACDR Read you loud and clear, Dick.

CC-H Roger. Me too, Tom.

ACDR Okay. One thing that is a problem here is the fact that we got to do everything in series the thing is so cramped.

CC-H Just from the - all the gear that's around huh?

ACDR That's right, yea. And when you put the UVA cable in you can't do the fish experiment because once you get by the tub - we're working it out but I things are just going slow because it's so damn crowded.

CC-H Roger. I understand.

END OF TAPE

ASTP (USA) MC120/1
Time: 11:22 CDT, 28:02 GET
7/16/75

SPKR CAP COMM, flight.
CC-H Apollo, Houston. I need to know where you are in the checklist so we can plan this ATS pass. As you know, there's several things that had - planned to be going on here, including the TV checkout and then after that the docking system checkout. Why don't you let me know where - where we are and - we can plan accordingly.
CMP Okay, Dick. Page 1-4, on the right side, and Deke is setting up the DAC right now.
CC-H Okay. Understand, and when you get into the next step on the TV installation and checkout - after that's set up, why don't you let us know and we can - we'll get that out of the way.
CMP Fine.
CC-H Incidentally, we are coordinated with the Moscow Control Center to do a voice check when we get up to Eupatoria, that's about another 16 or 17 minutes from now, so when we get up there, we'll probably stop what we're doing and do that real fast and we're going to do a voice check - first, from May here in Houston, and then from Overmyer in Moscow.
CMP Very good.
CC-H Okay.

END OF TAPE

ASTP(USA) MC121/1
Time: 11:31 CDT, 28:11 GET
7/16/75

ACDR Houston, how do you read through ATS?
CC-H Loud and clear, Tom. How me?
ACDR A - ok.
ACDR - - good shape, Dick. We're just slowly getting caught up on things here.
CC-H Okay. Where are you in your stuff, Tom?
ACDR Okay, on the flight plan, I just transferred the life vest from F1 to U2. In setting up, they finished a DAC 02 setup and the TV installation and checkout from the flight plan at about 28 hours there. We haven't got to the docking systems checkout at all yet.
CC-H Okay, when you get to a point that you're ready to start the docking systems checkout, let us know and we'll go back to data, and I understand that the guys are in to the TV installation and checkout in the docking module. Maybe we can get on with the - looking at the color charts on the various cameras.
ACDR They're not quite ready yet.
CC-H Okay. Fine. We're standing by and when they - when they are ready just let us know and we'll start.
ACDR Roger.
PAO This is Apollo Control. The Soyuz crew has been successful in troubleshooting their color camera problems aboard the spacecraft and we're now getting a color picture of Alexey Leonov and Kubasov coming down on the Soyuz television link, which is - can be seen on the monitors in the newsroom or in the Soyuz room in room 135, Building 2.
CMP - - we're going to go ahead and go to TV downlink mode and look at the command module's TV. When we get set up in the DM, we'll switch over into there and do that work, so we'll be dropping out here for about 30 seconds, and then I'll call you back.
CC-H All right.
ACDR Houston, Apollo.
CC-H Go ahead, Tom.
ACDR Okay. One thing in this docking system checkout, I've been going through the procedures - you know, extending the guide ring and all that, but the whole thing is: they've got Deke doing the TV activation and checkout up there and he's the one that calibrates the thing and uses the camera. Little bit of a goof on the flight plan, I think.
CC-H Okay. Stand by just a second.

END OF TAPE

ASTP (USA) MC122/1
Time: 01:14 CDT, 28:21 GET
7/16/75

ACDR Okay. Stand by just a second.
ACDR Okay, Dick. I can read you about 4 by 4. I understand you're transmitting through Eupatoria.
ACDR I can just barely read you - read you at all. Over.
ACDR Okay.
ACDR Houston, I can hear just wavy noise in the background.
ACDR Bob, read you about 3 by 3 with a little echo, but once we got the probe problem squared away, we're doing just okay. Just behind the timeline, but we'll be catching up. Over.
ACDR Roger, Bob. Thanks so much. Tell everybody there hello and we're pressing right on.
ACDR Roger. Thank you.
CC-H Apollo, Houston. I'm calling you back through the satellite now. How do you read?
ACDR Loud and clear, Dick. And I read Bob about 3 by 3; I could understand him.
CC-H Okay. We're going to have to take a look at exactly what - what the configurations were there. I was copying you down on air-to-ground - well, on - I believe through S-band through the satellite, but I was transmitting through Moscow. But we'll check it out; we may have to do another voice check at a later time.
ACDR Roger, Dick.
CMP Okay, Houston, Apollo. Do you see the color chart on the TV now?
CC-H Okay. Stand by just a second and let us switch cameras and we'll look at it.
CC-H That's affirm. We do have the picture here and let us take a look at the color.
DMP Soon as you get through with that side, let me know. I've got a readability test for you on the other side.
CC-H Okay, Deke. We'll let you know. We want to look at it for at least 30 seconds and - and - so stand by.
DMP Okay.
DMP Go ahead, Tom.
CC-H Deke, Houston. We're satisfied with this view now. Do you have the other TV camera on yet?
DMP Negative we haven't gotten to there yet for checklist.
CC-H Okay, fine. When you get it on, we'll take a look at the - at the color chart from that camera. (Garble).
DMP Can you read our readability sign?
CC-H Well, I'm trying to read it. Hang on a second.
DMP Maybe I've got it upside down for you. Which direction should I turn it?
CC-H Bring it in a little closer to the camera if you can.
CC-H (Russian)
DMP Looks readable on our monitor anyway. Let one of your Russian friends read it.
CC-H Okay. We'll have to get one of those.

END OF TAPE

ASTP (USA) MC123/1
Time: 11:51 CDT, 28:31 GET
7/16/75

SPKR Voice.
ACDR Houston, Apollo.
MCC-H Go ahead, Tom.
ACDR How about doing me a favor, Dick. Check with the flight planners and the stowers and find out where the bracket is that mounts the 300 millimeter Nikon lens out the right window.
MCC-H Okay. Sure will do it.
MCC-H Tom, Houston. It's in A5, ALPHA 5.
ACDR Okay. Thank you.
MCC-H Okay.
ACDR Houston, Apollo.
MCC-H Go ahead, Tom.
ACDR Yeah, looking back on the flight plan here at 28:10, it says deactivate primary evaporator. Do we really want to do that as hot as this bear's running?
MCC-H Standby.
MCC-H Tom, that deactivation of the primary evaporator is to support the UVA COAS cal that's listed in the flight plan, at the start of the next night cycle at 28:30. So, if you don't think that we're going to be able to get the COAS cal because we're running a little behind, we can leave the primary evaporator running and we'll pick up the COAS cal at the - hopefully at the next dark side pass. We will have - -
ACDR There's no - there's now way we can get that. It'll have to be the next one and we'll have to work all during eating period to catch up, here.
MCC-H Roger. Understand. And, we - so leave it running and - but the - the direct answer to your question is yes, it will have to be deactivated a few minutes prior to whenever it is we run the COAS cal.
ACDR Okay. And, look ahead when we get ATS coverage in daylight where you want to use that docking - instead of the docking system, I would estimate it would be over at about 29:35 or from there on. About 29:30 - 35.
MCC-H Okay. We'll take a look and - probably at the tail end of this ATS pass if you guys'll give us a good idea as to where you are we can - we'll try to help you out on the flight plan.
CMP All right, Houston. We now have the second TV camera hooked up in the DM if you'd like to look.
MCC-H Roger. We are looking at it Vance. It looks like the gray tape has unsticked itself. You might put the color chart back and we'll look at it.
CMP Right.
CC-H Okay. We're looking at the view guides. There is a - -

END OF TAPE

ASTP (USA) MC124/1
Time: 12:01 CDT, 28:14 GET
7/16/75

CC-H Okay. We're looking at the view guides. There is some shadow on the - and the cables are a little bit in the way, so let us just look at it here for a second and I'll get right back to you.
ACDR Okay.
CC-H Okay. That's got everything out of the way of the color chart now so if you can, stand by with all that speahetti for a second and I'll get back to you.
DMP Right.
CC-H Okay. We're satisfied with looking at the color bar charts. Thank you much. You can press on with the check list. Thanks Deke.
DMP Okay.
CC-H Looks like you all took some snakes with you in addition to the mosquito.
ACDR Hey, you're right. We've got a real ranch up here.
CC-H Roger.
ACDR We need a couple of crocodiles to go with them.
CC-H (Laughter) Roger.
CC-H Apollo, Houston for Deke or Vance - one of you guys in the DM.
SPEAKER Go ahead.
CC-H Hey listen. We think we might make a little money here by skipping step 12 and delaying the multipurpose furnace preparation and going ahead and doing step thirteen which is the DAC TV evaporation test since we are - are locked up on television where we have about another 7 minutes left on the ATS. So, we'd suggest that you do step 13 and then - and then go back to step 12 if that's okay with you.
CMP Okay, fine. We'll jump into it.
CC-H Okay, fine. If you'll hustle, maybe you can just get it out of the way before we have LOS, and then you can go back and do the other one. Thank you.

END OF TAPE

ASTP (USA) MC125/1
Time: 12:11 CDT, 28:51 GET
7/16/75

DMP You guys ready down there, Dick?
MCC-H Stand by just a second, Deke.
CMP Okay. Do you want us to turn the DAC on? We - We'll turn it on now and we can turn it off if you want us to later.
MCC-H Okay. Go ahead and turn it on and we're looking at the TV and we'll watch. Go ahead.
DMP Okay. It seems to be running.
CC-H Okay. Hang on just a second.
DMP (Garble) test here.
CC-H We guessed what it probably says, but - we still haven't seen it. Can you tilt the page a little bit away from you, Deke? In other words - the other way - the other way. No, it's got too much glare on it.
CC-H Deke, Houston. We're satisfied with the vibration test. For your information, we've got practically no vibration with the DAC running, so you can press'em on with the procedure and - we have some good guesses as to what that says, but we just can't read it because of that glare on the white page.
DMP Okay. And I'm glad you passed our reading test.
CC-H (Russian)
DMP (Russian) That's a big question.
CC-H Okay. That's what we thought. We'll pass it on.
CC-H Apollo, Houston. We're just 2 minutes from ATS LOS and we're just going to drop out a couple of minutes. I'll call you at Orroral Valley.
DMP Okay.
ACDR Roger, Dick. We'll pick you up at Australia.
CC-H Okay. See you there.
PAO This is Apollo Control. Loss of signal through ATS-6 satellite. About 50 seconds remaining in a gap here until we reacquire Apollo through Orroral Valley tracking station in Australia. During some of the testing of the television cameras aboard Apollo and the docking module, the color bars were placed for color of separation and color tests, and Deke Slayton said he had a reability test for the ground and he turned the card over and it had a message to former astronaut Wally Schirra which said (Russian) which in Russian means, "Are you a turtle?" Schirra having been one of the founding members of the Turtle Club. CComing up now on acquisition at Orroral Valley and standing by.
CC-H Apollo, Houston. Through Orroral Valley for 6 minutes.
CC-H Apollo, Houston. Through Orroral Valley. We dropped out there for a second; I'm back up and standing by.
ACDR Okay, Dick.
CC-H Apollo, Houston. We're one minute from LOS. We'll give you a call at Quito at 29:27. See you there.
PAO This is Apollo Control at 29:03 ground elapsed time. Loss of signal through tracking station at Orroral Valley. Next station in 24 minutes will be Quito, Ecuador and resumption of communications through the ATS-6 satellite for some 55 minutes. We'll return at that time. This is Apollo Control.

END OF TAPE

ASTP (USA) MC126/1
Time: 12:46 CDT, 29:27 GMT
7/16/75

PAO This is Apollo Control, 29:26 ground elapsed time in the mission of Apollo and Soyuz. Quito, Equador tracking station will pick up Apollo in about 25 seconds. Apollo now in its 14th revolution - nearing the end of the fourteenth revolution. Apollo now trailing Soyuz by somewhat less than 1800 nautical miles. We should have acquisition through Quito at this time. We'll stand by for Dick Truly's call to the crew of Apollo.

CC-H Apollo, Houston through Quito for 4 minutes.

ACDR Okay, Dick. We're still finishing up the DM activation kit and we'll have the multipurpose furnace okay. We need to have a couple of decisions on the flight plan. Are we going to do that UVA OPS or are we going to extend the docking mechanism, or are we going to do the U - the cal on the UVAX on that? Over.

CC-H Okay. That's - Tom that's what we've been talking about during LOS and I guess to make an intelligent decision, we need to know exactly how far you guys have gotten into docking - into the docking module checkout.

ACDR Okay, Dick. I'm about through here, actually. I've got to take the readings yet and close down - it should be in less than 5 minutes.

CC-H Okay. Fine. When you get the readings, I'll be standing by to get them, and Tom, let me get right back to you. Okay?

ACDR Roger.

ACDR Houston, Apollo.

CC-H Apollo, Houston. Go ahead.

ACDR Okay, Dick. We haven't even thought about eating yet. We could skip that and work it - try to work it in later.

CC-H Well, we don't plan on you skipping it. We've we are trying to juggle things for the afternoon and seeing how we can - how we can catch up. And we're talking about, now, what we want you to - how - how we want you to plan this next hour or so.

CMP Houston, Apollo

CC-H Apollo, Houston. We're about 30 seconds from LOS here at Quito. I'll see you when you get locked up on the ATS. Tom, what we'd suggest is - is during this - is that we do the docking system check - checkout in the joint OPS set list after we get locked up on the ATS and also during this up-coming night period that we try to get this UVA COAS cal in and then break for lunch.

ACDR Sounds good.

CC-H And we'll be looking at this afternoon's schedule for the rest.

END OF TAPE

ASTP (USA) MC127/1
Time: 12:56 CDT, 29:36 GET
7/16/75

CC-H Apollo, Houston, through Bermuda. How do you read?
ACDR Loud and clear.
CC-H Okay, Tom. We were close to LOS there. Let me just review what it is we are going to be doing in the next few minutes and then we'll get on with it. First of all, when we get locked up good on the ATS, we'd like in the joint systems checklist starting on page 1-1 to go through the docking system checkout. After we get through with that, we plan on doing the UVA COAS cal and at that point, we'll just break and let you guys get a bite to eat. Also when we come over the Russian side again, we plan to do a real quick voice check and - once more. And in order to be set up for the UVA COAS cal, we'd like to go ahead and deactivate the primary evaporator.
ACDR Good work.
CC-H Okay. Real fine.
CC-H Apollo, Houston. One comment on the docking system checkout - I don't think there is any confusion in your mind but just to make sure, there is a couple of places in the procedures that it referrs to - a couple of notes where it says if we are checking system BRAVO for this checkout today, we are going to checkout the system ALPHA only so just ignore those notes. We will not be checking out system BRAVO.
ACDR I understand.
CC-H Apollo, Houston. The EECOM noticed that the EVAP bath (?) temperature is down real low. You might check again through the procedure on deactivating the primary evaporator - make sure that the valves all went in the right direction.
ACDR Okay.
ACDR (Garble) Houston. Are you ready for us to activate the circuit breakers?
CC-H Tom, yes. What I was just getting ready to call you was we've got data on the ATS. We want you to go ahead and start through the procedure and when you - are you through with step 2? if not, when you get through with step 2 let us know and we'll proceed from there.
ACDR We're finished with step 2, ready to proceed.
CC-H Okay. Proceed, go ahead. And let us know what you are doing please.
ACDR Okay. Starting step 3 now.
CC-H Okay.
ACDR Okay. We have step 3 completed and Deke says he's completed 4.
CC-H Okay. Stand by a second.
DMP Yeah, and Dick, for your information, the only line I can see is line 5 and 6. For some reason, the rest of them are all blocked.
CC-H I understand that you can see - -. Okay. You can see lines 5 and 6 only?
DMP That's affirmative. I can see a little bit of 4 but 3, 2, and 1 - the ones we usually use for this - none of them are visible. They are all blocked out by some shrouds.

ASTP (USA) MC127/2
Time: 12:56 CDT, 29:36 GET
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CC-H Roger, copy.
DMP Anyway, it ought to be accurate enough.
CC-H I'm sorry, Apollo. Say it again.
DMP I think our (garble) had a good enough accuracy, I would think, with line 5.
CC-H Roger. Stand by.
ACDR Houston, we're still standing by.
CC-H Roger, Tom. We were talking. Let me get back to you right now. Back on step 3, I probably misled you there. On Step 3 we would like to close all the breakers for systems A and B but later in the procedure, when it says actually activating system B, we will not do that so go back to step 3 and close all breakers for both systems and also then we'll be ready to proceed. We do want to terminate the BATT ALPHA charge though before proceeding further in the - with the motors in the procedures. For your information, it's in the systems checklist page 1-6.
ACDR Okay.
CC-H And so let me know when the circuit breaker is in and the BATT A charge is terminated and we'll press on.
ACDR Okay, all --

END OF TAPE

ASTP (USA) MC128/1
Time: 13:06 CDT, 29:46 GET
7/16/75

CMP Okay. All 12 circuit breakers are in.
CC-H Okay.
ACDR Okay. The charge is terminated and BAT RELAY BUS breaker is IN.
CC-H Okay. Super. Press on and start - starting with step 7.
ACDR Okay. Starting guide ring extent.
CC-H Okay. We're watching it on the data.
CMP Our passive light went out.
CC-H Okay.
CMP Okay. We have a guide ring extent light.
CC-H Okay. We see it here on the ground too, Vance, so you just continue right on through.
CMP And Deke's working the camera part of 7 now.
CC-H Okay. And just let us know when you - as you continue through, Vance.
CMP Roger.
DMP Okay, Dick. On the camera I get a 16 foot 11 and one half inches prior to extension and I now have 17, 10 and three quarters on the first reading, 17, 11 on the second.
CC-H Okay, Deke. Copy.
CC-H Apollo, Houston. That extension looks good to us so go ahead and continue.
DMP Roger.
CMP Okay. Starting guide ring retrack.
CC-H Okay.
CMP Okay. We have a passive light on.
CC-H Okay. Same here.
CMP Going to step 8.
CC-H Okay. We're right with you Vance. Go ahead.
CC-H Okay, Vance, you can go ahead through steps 8 and 9. We're - we think that was a good test and - and we can go ahead and get set up to do the coas cal procedure that's in - back in the back of the book there.
CMP Okay. Understand. Glad it's a good test, right?
CC-H That's right. It looks real good. And the next procedure is on page 10-5. Stand by and I'll be right back to you.
CC-H Apollo, Houston. We'd like to go ahead and do this COMM check again that's coming right up here over the Russian site. In order to do it, there is two - there is one circuit breaker and a switch that needs to be thrown. The curcuit and they're listed - I'll tell you what - they're listed in the flight plan at 28 hours, and 20 minutes. The circuit breakers on panel 815 and the switch is on - on the audio panel of whoever's going to do the COMM check is just VHF, FM to TR.
ACDR Dick, what time do you want to do this FM check?
CC-H We're coming AOS in Eupatoria right now, so if you can throw those two switches, if it's convenient now, we can do it now if it's not, we can catch it another rev.

ASTP (USA) MC128/2
Time: 13:06 CDT, 29:46 GET
6/17/75

CMP Deke's on his way up right now.
CC-H Okay. Super. Let me know when - when you're configured and we'll go ahead and do the check.
ACDR Okay.
CC-H And also, at your convenience, we'd like to get the BATT Alfa charge going again since we've done the docking system check - check.
ACDR Okay.
DMP In Houston, your BATT charge is started on A?
ACDR Okay, Houston. We have the FM closed. We're ready to do the COMM check.
CC-H Okay. Stand by just a second. Let me give you a call on the right loop. Hang on.
ACDR Roger, Dick. Read you loud and clear through there.
ACDR All righty. You're coming through very - you're coming through as good as VHF REFSMMAT.

END OF TAPE

ASTP (USA) MC129/1
Time: 13:16 CDT, 29:56 GET
7/16/75

ACDR Roger. Read you loud and clear. I'll give you 1-2-3-4-5 Over.
ACDR Roger.
ACDR And Dick, after we complete this comm check, you want that circuit breaker open?
ACDR Roger, Bob. Roger, read you loud and clear. How me?
ACDR (Russian)
ACDR (Russian)
ACDR All right. Thank you, now.
ACDR Okay, Dick. We had a good comm check with Bob.
CC-H Okay, Tom. I'm back on the S-band now. I concur. And we want you to leave the circuit breaker on channel 815, closed.
DMP Okay. Hey Dick, while I'm here - you want those systems volt meter readings?
CC-H Yeah, go ahead.
DMP Okay. System A. Number 1 latch, 1.05. Number 3 is 1.2. Number 5 is 1.8. Number 7 is 0.85. On system B - number 2 is 1.5. 4 is 0.8. 6 is 1.0. And 8 was 1.2.
CC-H Okay, Deke. Copy. Thank you much.
DMP And the question on the furnace - I think you got our call that the shroud door will not lock shut. It's open about an inch or two.
CC-H Which shroud door -
DMP In checking it we - -
CC-H Which shroud door was that, Deke? I'm sorry - I don't understand.
DMP That's on the furnace - -
CC-H Oh, okay.
DMP - - on the multi purpose furnace.
CC-H Okay.
CC-H And stand by just a second, please.
CC-H Apollo, Houston. What we'd like to do now is go ahead on page 10-5 and start the COAS cal procedure.
ACDR Stand by.
CC-H Okay.
ACDR Okay. Houston, Apollo.
CC-H Go ahead, Tom.
ACDR You want me to - on the 10-5 in the UV absorption - do you want to go ahead and do a VERB 49 and maneuver to that - to 225, 145, and 1 - and 348?
CC-H Roger. We think that's where you are now, Tom.
CC-H Apollo, Houston.
CMP Go ahead.
CC-H Hey Vance - I assume that ya'll are pressing through the COAS cal procedure. It looks like in the - getting back to the primary evaporator - we think we may have dried out the evaporator.

ASTP (USA) MC129/2
Time: 13:16 CDT, 29:56 GET
7/16/75

We need - if someone is free, we can start this procedure now. If not, as soon as the COAS cal is done. What we'd like is to make sure that the back pressure valve is closed and then do a primary evaporator reservice procedure, which is on page 1-18 of the systems checklist - with the exception of: delete the last step in the procedure.

CMP Okay. Understand. Make sure the door's closed and do the EVAP reservicing procedure, except for the last step.

CC-H Yes. If there won't be a problem with the doors - you're right about the doors being closed. But there shouldn't be a problem, because there's a 15 minute waiting period in this reservicing procedure. And we should be through with the cal by that time.

CMP Okay. And we're right - the cal's going pretty well. Deke's defining the limits right now. Okay. When you get to the end of the cal procedure, give me a holler. Okay?

CMP Roger.

END OF TAPE

ASTP (USA) MC130/1
Time: 13:29 CDT, 30:09 GET
7/16/75

CC-H Apollo, Houston.
CMP Go ahead, Houston.
CC-H Vance, we're talking about this afternoon's activities and what can be pushed around or skipped without much impact to the mission if need be. I'm assuming all three of you guys removed your OBS harness last evening; is that a fact?
CMP Correct.
CC-H Okay. How's the cal coming?
CMP We're just finishing it up; we're on the last step, 7; cleaning everything up and I think is was a good cal, Deke.
DMP Stand by.
CMP Deke points out that 3 - 3 degrees to the right and 2 and a half degrees to the left of the center of the COAS, he was still getting a good signal, which is a little strange, since the limits aren't supposed to be that wide.
CC-H Okay. Copy. Vance, while I'm - while I'm talking to you about this, after you get through with the COAS cal procedure, if you'll look on the flight plan at - it's listed in there as 29 plus 55. There's a series of about 4 steps there that'll shut down the UVA lamps and power and so forth. It's called - I think it's probably also in that procedure but we want you to be sure and do those steps when you're through.
CMP Okay. Understand.
CC-H Okay. I'm sorry. They're not in a procedure, but since the flight plan's a little bit off, just when you get through with the cal, just do those steps there. And let us know.
CMP Okay. Say the time again.
CC-H 29 plus 55.
CMP Okay, thank you.
CC-H Okay.

END OF TAPE

ASTP (USA) MC131/1
Time: 13:42 CDT, 30:22 GET
7/16/75

CC-H Apollo, Houston.
CMP Go ahead.
CC-H Roger. We're about two minutes to LOS and we will not be seeing you again until you get up toward stateside. What, as far as the flight plan goes, here's what we recommend that you do. First of all, go ahead if you haven't already started and get a bite to eat. And - there's - it is not clear whether or not we're going to have to do this maneuver this afternoon, so we can't be sure about the rest of the flight plan. But what we'd suggest is, delete the mapping pass, remain in your present attitude, I've got high gain angles for you. Don't worry about the SIM bay activation, we've - we'll probably be able to pick it up later on this afternoon.
DMP Yeah well of course the next thing two of us have got is donning the OBS and exercise which we haven't started either one of them, obviously. Are you saying you want us to continue with that?
CC-H Negative. What we'd like you to do is, for right now, forget the OBS and exercise, we may very well go ahead and delete them, and just go ahead and get a bite to eat and we'll be squared away when we get AOS, as to what to do. We'll know a little bit more about the maneuver at that time. Okay. Let me give you some high-gain angles, please. The pitch is minus 39 - 39, yaw 121 degrees. And those are good for your - -
DMP (Garble.)
CC-H I'm sorry, Deke, go ahead.
DMP Minus 39 and 121.
CC-H That's right and that's for your present attitude. And - we'll see you at MILA at 31:04.
CMP Okay, I take it you don't want me to do the SM experiment activation unless - coverage.
CC-H That's affirmative. We want to go ahead and get - just let you guys get squared away and get a bite to eat.
CMP Okay.
CC-H We'll try to pick it up later, Vance.
PAO This is Apollo Control. Loss of signal at 30 hours, 30 minutes ground elapsed time. Next station in 33 minutes will be the Merritt Island Launch Area. Meanwhile the flight plan for this afternoon is being rejuggled a little bit to allow the crew to get caught up. Some of the exercise period and the biomedical observations system, or the OBS, that was scheduled for the commander and docking module pilot has been slipped until later in the day. Also, there's some doubt now as to whether the Apollo phasing maneuver scheduled at 32:43 ground elapsed time will really be necessary or not, as the flight dynamics people further massage their current tracking data, they will determine whether or not that maneuver will have to be planned for. The crew is behind the time line in getting into their meal period and this is one of the reasons that - some of these events such as the Earth Observations and mapping, scheduled at 31 hours is being deleted. We'll return in 32 minutes at Merritt Island Launch Area and 55 minutes of satellite coverage. This is Apollo Control at 30:31.

END OF TAPE

ASTP (USA) MC132/1
Time: 14:23 CDT, 31:03 GET
7/16/75

PAO This is Apollo Control, 31:03 ground elapsed time. Merritt Island Launch Area tracking station will acquire Apollo in about 20 seconds. Overlapping with Bermuda and the ATS-6. Crew likely in their meal period, somewhat belatedly at this time. And some realignment of the afternoon flight plan under way which will be passed up to the crew as the afternoon progresses. We're standing by now for the next 57 minutes for Apollo air/ground.

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

DMP Yeah, go ahead Bo.

CC-H This is Richard here, Deke, let me - I assume that you guys are in an eat period. If you can - one thing, we wanted to know what you were doing, naturally, and another thing I wanted to talk to you about the up coming burn and our choices on the trajectory. Over.

DMP I think we're right over the cape.

CC-H You're right. You're passing right over the launch site just about now.

DMP Yeah, we can see it. We're in a good attitude here for earth obs. Okay. In answer to your question we're just sort of rapping up lunch for probably another ten minutes or so.

CC-H Okay. Let me tell you our thoughts on the trajectory and the burn this afternoon and what we propose for the flight plan if you can listen. Over.

DMP Okay. Go ahead.

CC-H Okay. We have a very small out of plane component in the trajectory. It's in the neighboorhood of 7 feet per second, however; it - the node is placed in such a way that if we don't get it out, it will affect the NC2 and NSR burns tomorrow. Essentially the gimbal angle would be about 40 or 45 degrees, something like that, and it will about double the size of the two burns. This is - we got plenty of gas and so this is - be no problem but one other consideration is - is that the trajectories if you're - the perigee caused by the NC2 burn, if the tracking data went the wrong way during the evening, could conceivably give us an NC2 burn that we couldn't execute because of the perigee. So, we're essentially faced with the choice of doing the PCM burn this afternoon - the whole thing and getting the rendezvous squared away per nominal - for tomorrow or doing a small retrograde burn and try to catch up on some of the flight plan items. I think what we're leaning towards right now is to go ahead and do the - do the burn this afternoon which is going to come up here in just a short while and then essentially for the time being, forget those items that are listed in the flight plan until we tell you different that occured prior to this time of day. This way we'll be set up perfectly for the rendezvous tomorrow and then you can jump right back into the printed flight plan for the rest of the afternoon with what minor changes we might have to make. Over.

ACDR That sounds like a brilliant idea. We're all for that.

CC-H Okay. Assuming that's what we're going to do we