

ASTP (USA) MC96/2  
Time: 00:09 CDT, 16:50 GET  
7/16/75

USA                    Okay. See you in the morning. Or somebody, who's  
doing it?

USA                    Good night.  
CC-H                    (garble)  
PAO                    - -it's gonna be through the applied technology  
satellite, however, the crew has been bid good night by Cap Comm Karol  
Bobco, giving his good night call in Russian. Wakeup time will be 7:50  
central daylight time or the 24 hours and 30 minutes ground elapsed time.  
The ground elapsed time clock here at the Mission Control Center now  
reads 17 hours. The clock has been updated in order that the Apollo  
spacecraft clock matches that of Soyuz. The tru - the Apollo spacecraft  
still playing catchup to catch the Soyuz spacecraft which will occur on  
Thursday. The two vehicles are approximately 24 hundred miles apart at  
this time. At ground elapsed time of 17 hours, this is Apollo Control.  
That's only 2 minutes of tape, the crew called the ground concerning  
a problem the problem with the probe. We'll play that tape now and  
bring the line up live.

DMP                    Hello, Houston, Apollo.  
CC-H                    Apollo, Houston. Go ahead.  
DMP                    Alright Bo, we got a problem. We can't get the probe  
out to stick that wonderful little freezer up there.  
CC-H                    I understand, you can't get the probe out.  
USA                    Yes, Vance will tell you about it. Here- -  
CMP                    Okay, Bo. Everything in the probe removal checklist  
on the cue card is going - has been going great up through step 11. Step  
12 is capture latch-release tool 7. You inserted the pyro cover,  
you turn it a 180 degrees clockwise to release the capture latches, well,  
here's where the problem is, and let me explain it to you. Do you have  
somebody there that knows the probe that can listen?

CC-H                    Roger, go ahead.  
CMP                    Okay, as I look in the back of the probe, my - in  
other words, at the back of the pyro cover, I'm looking with my flashlight  
through the hole where I insert this tool, and there's something behind the  
pyro cover that's in the way that's preventing me from putting this tool  
all the way in, and as I look at it it's - it's actually one of the  
pyro connectors. It happens that this tool has to go down through the  
pyro cover in between, normally, some pyro connectors, but one of these  
pyro connectors has rotated such that it's in the way and I can't put  
this tool in.

CC-H                    Roger, I understand.  
CMP                    Now, I suppose the one thing I should do is take the  
cover off - the pyro cover off - and I've got proper tools to do that.  
DMP                    Bo, what it's getting down to is (garble) We've been  
up pretty late and this whole thing about sticking the cyro freezer  
up there (garble) and either we're going to stay up another 3 or 4  
hours messing with that probe or else we're gonna call it quits.  
CC-H                    Roger, we copy and we're talking about it right here  
now.

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CMP                   Incidentally, I stuck a pencil down in - or a pen  
down in there to see if I could easily move that pyro connector out  
of the way, and it doesn't seem to want to move.

CC-H                   I understand.

DMP                   Houston, Apollo.

CC-H                   Apollo, Houston. Go ahead.

DMP                   Okay, Bo. Looking up here at the mechanical  
mechanisms involved it's hard to see - it's gonna take quite a bit of  
coordination with you people down there, and it's gonna take quite a bit  
of time and (garble)- -

END OF TAPE

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ACDR                    Okay, Bo. Looking up here at the mechanical mechanisms involved, to spot this thing it's going to take quite a bit of coordination with you people down there and it's going to take quite a bit of time. And what I propose is right now we just put the hatch back and go like we were going to originally. Just leave the little old freezer right here, because we'll spend four and five hours working on that fair.

CC-H                    Roger. We agree with you; we think we'd like to bump - up the pressure of the O2 in the cabin and sleep with it that way and we're looking at the problems right now.

ACDR                    Well, except - yeah, we got a problem; we can't get the hatch closed.

CMP                     Bo, hatch 1 will not go back in, of course, unless we go through a process of trying to retract the probe so that it will let the hatch fit. How would it be if we slept with the hatch on?

CC-H                    Roger. We'll get to you with a suggestion here in just a couple of minutes, Vance.

CMP                     Okay.

CC-H                    Apollo, Houston. We concur with your suggestion not to work on that this evening. We just want to look for a configuration so you can sleep with the freezer in the cabin.

CC-H                    Apollo, Houston. Over.

ACDR                    Go ahead.

CC-H                    Roger. What we'd like you to do is to close the over - overboard dump if you're finished with the urine system, then take off the lid to the cryo freezer, boost up the cabin pressure to 5.5, replace the lid on the cryo freezer, and that should be an acceptable sleep configuration.

ACDR                    Okay. Now, let's go over that again. When we're finished with the urine system, go - put that QD back on the waste bin. You'll have to repeat that, Bo.

CC-H                    Negative. We'd just like you to close off those vents - the waste stowage vents and the - -

CMP                     Yeah. What you want us to do - yeah, what you want us to do is close the vents; that's the overboard drain, and the - well, the battery and the waste; all vents down on the panel R11. You'd like to have us pump the - take the top off the cryo freezer, pump the cabin pressure to five and a half psi, put the top back on - and that should be a safe configuration.

CC-H                    That's right and the procedures for that cryo freezer are on page 1-3 of the Experiments checklist, number 10, if you need them.

CMP                     Okay.

CMP                     (Garble).

CC-H                    Apollo, Houston. Go ahead.

CMP                     Roger. Just some more information regarding the probe. Whenever we do something with that - in the morning, or whenever - looks like I can take off the faring on the back to move this little

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CMP connector out of the way if I retract the probe. There are 3 screws that allow you to take this fairing off - pyro cover, they call it - and - but there's another, and they're easy - but there's another little screw down on the side that looks like you can only get at it if you have the probe retracted. And so, if the approach is to take that fairing off, why that's just some information for you - the probe is now in a retracted state.

CC-H Understand. You look like you could take off the fairing and the pyro cover by loosening 3 of the screws, but there's another screw that might require the probe to be retracted.

CMP That's correct. And it's not retracted now, and - but it would have to be retracted in the sling.

CC-H Roger. I understand.

ACDR Okay, Bo. And you want the pressure bumped - before we shut the (garble).

CC-H Roger. After you opened it, we'd like you to bump the pressure up and then close the cover again.

ACDR Okay. I got direct O2 on. Pressure's coming up.

CC-H Apollo, Houston. And we'd like to remind you again to close all of those overboard vents if you have not done so.

CMP Okay. We're doing that.

ACDR Okay. Bo, could you brief us on - in the pad it says we're supposed to have the cover off for over 40 seconds; we're holding it while we're bumping the pressure here.

CC-H Roger. Keep it open until the pressure is equalized and then replace the pressure - then replace the cover.

ACDR Okay. If you've got a digital readout, Bo, you might help us. It looks like I've got about five and an eighth pounds per square inches. You've got a better readout down there than we have if you've got telemetry.

CC-H Roger. We'll give you a call.

ACDR Okay. Thank you.

ACDR We're reading about 5.253, Bo.

CC-H Roger. We read 5.23.

ACDR And I read about 5.4555 on the gauge now.

CC-H Roger. We read 5.43.

CC-H Apollo, Houston. We read 5.50 now. You can shut off the direct O2.

ACDR Direct O2 off, Bo.

CC-H And when the cover goes back on the cryo freezer, torque the bolts down with the tool, if you have it.

ACDR Roger.

CC-H Apollo, Houston.

ACDR Go ahead.

CC-H Roger. We'll be working on the probe tonight and we're sure we can figure out some way that you'll be able to get it out of there in the morning. And have a good night's sleep. And one last item.

CC-H And that is the secondary EVAP throw; we need it off before you go to - -

END OF TAPE

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CC-H - figure out some way that you'll be able to get out of there in the morning. And have a good night's sleep. And one last item, and that is the secondary EVAP throw. We need it off before you go to bed.

ACDR Will do. Thank you, Bo.

CC-H Good night.

PAO Apollo Control. Ground elapsed time 17 hours 24 minutes, with the crew being given another good night call from CAPCOM Karol Bobko. After the crew had been bid good-night earlier, approximately 18 minutes ago, Vance Brand called to CAPCOM Bobko and said he had a problem with removing the probe from the tunnel of the command module. It was scheduled in the flight plan for him to remove it and place it in the docking module. However, he told the ground that he had problem with inserting the tool necessary to release the probe. Flight director Neal Hutchinson instructing flight controllers here to work on that problem and let the crew go to bed. And they'll review the problem here at the Mission Control Center and pass up a solution to the crew in the morning. At ground elapsed time 17 hours and 25 minutes, this is Apollo Control.

END OF TAPE

ASTP (USA) MC99/1  
Time: 01:59 CDT, 18:39 GET  
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PAO Apollo Control. Ground elapsed time 18 hours 39 minutes. The Apollo crew has been asleep now for not quite 2 hours, after reporting a problem in removing the probe in the command module tunnel. Engineers and flight controllers here at the Mission Control Center continue to review the problem reported by Vance Brand. He said that when he went to remove the probe, it hung up in the tunnel. And this caused - the hatch could not be closed. The probe must be removed from the tunnel before entry can be made into the docking module. Flight director Neal Hutchinson has asked his staff support room to prepare for procedures to disassemble the probe. Assembly and - disassembly and assembly of the probe has been successfully done on a previous Apollo flight. The probe - onboard is the probe which was carried on Apollo 14 and returned after Apollo 14 had difficulty in docking with the lunar module. The probe was returned, refurbished, and used again on this mission. The crew will be awakened at 7:50 central daylight time today and will be advised on what steps should be taken to remove the probe. Wake up time, again - 7:50 A.M. central daylight time. At ground elapsed time of 18 hours 41 minutes, this is Apollo Control.

SPEAKER Engineers and flight controllers continue to review a problem reported briefly by Vance Brand before the crew went to sleep.

END OF TAPE

ASTP (USA) MC100/1  
Time: 03:00 CDT, 19:40 GET  
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PAO 19 hours, 39 minutes ground elapsed time. This is Apollo Control. The Soyuz is presently southwest of southern Mexico on revolution 13 and the Soyuz crew is up. The Apollo is presently just south of Kodiak Island on revolution 8 and the American crew is still asleep. Not scheduled for wake up until 7:50 a.m., Houston time. Don Puddy and Cap Comm, Bob Crippen, now on duty. Change of shifts having occurred. Don Puddy's flight team not yet tackling the problem of the probe, which was the last real concern of Neil Hutchinson's team. Neil Hutchinson, in just about 15 minutes, will hold a change of shift briefing, that will occur in the large auditorium in building 2. Our next status report will be 1 hour from now. That'll be at 20:40 Ground Elapsed Time. At 19:40 GET, this is Apollo Control.

END OF TAPE

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Time: 04:03 CDT, 20:44 GET  
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MCC-M (Russian)

MCC-M (Russian)

PAO

A few moments ago, Flight Director, Don Puddy, speaking to his counterpart at the Moscow Control Center informing the folks over in the Soviet Union that the problem with the probe, that off going Flight Director, Neil Hutchinson mentioned in his change of shift briefing, was not a very significant problem in terms of time. Puddy thinking that the fix would probably take something on the order of 20 to 30 minutes, that not impacting anything very important tomorrow. Tomorrow's schedule contains several blocks which could be moved whole scale, and nothing would have to be rescheduled essentially. Apollo right now in a nominal 120- by 94- mile orbit, with a period of an hour and 28 minutes. One of the things the crew will be doing tomorrow, in addition to working on the probe fix, is taking photographs, Earth observations and visual observations experiments for principal investigator, Farouk El Baz. The targets of opportunity tomorrow occur on revolution 16 and include cloud and iceberg features around the New Zealand and Northern Australian part of the world. The Labrador current and also some photography over southern California. Our next status report will be at 21 hours and 40 minutes, Ground Elapsed Time. Right now, we're going to give you Neil Hutchinson's change of shift briefing runs about 30 minutes long. This is a tape replay of the briefing which just ended moments ago in the auditorium.

END OF TAPE



ASTP (USA) MC102/1  
Time: 04:34 CDT, 21:13 GET  
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PAO - here in Mission Control. The Apollo is northwest of Hawaii. And we've got data acquisition through Hawaii for Apollo. Soyuz is about 2,000 miles west of the Panama Canal. They are out of range, on Soyuz orbit 14. Their crew is up and awake right now, preparing for today's maneuver. Later on this morning, about 3 hours from now, the Soyuz is scheduled for a circularization maneuver which will bring their orbit to a circular orbit of 225 kilometers, nominal apogee and perigee being the same. The weather for tomorrow's Earth observations pass on rev 16 and 17 for the Apollo looks like it'll be mainly cloud top observation, since most of the New Zealand and west coast area that the crew will be looking at - be socked in with large clouds. Our next status report will be at 22 - check that - 21 hours and 40 minutes. We'll get back on a regular hourly schedule, now. At 21:14, this is Apollo Control.

END OF TAPE

ASTP (USA) MC103/1  
Time: 04:59 CDT, 21:40 GET  
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PAO 21 hours 40 minutes ground elapsed time. This is Apollo Control. Apollo presently on - going into orbit 10 or revolution 10, presently west of the southernmost parts of South America. Soyuz on their orbit 16 and between Africa and the South America continent in the middle of the South Atlantic Ocean. Small conference going on right now in the control center as the Don Buddy flight team has come up with a procedure for removing that stuck probe. The procedure involve reextending the probe, removing the cover for the pyro connectors, then moving one of the pyro connectors, apparently one of the connectors was installed wrong, and the probe removing tool can't be inserted into the proper slot. Then after the pyro connector is repositioned, the cap will be placed back over the pyro connectors, the probe, then jacked down and the tool tried again. The whole procedure will take probably less than 20 minutes, very little impact on the mission if it goes as planned. Tomorrow during revolution 17 of the Apollo, three of the astronomical experiments will have their hardware turned on and tested for the first time. The MAO 88 helium glow experiment, the MAO 83 extreme ultraviolet experiment, and the MAO 48 soft X-ray experiment. They'll be checking the hardware on those and calibrating the MAO 48 soft X-ray electronic hardware. On revolution 16, that's the data take revolution for another experiment titled geodynamics. The geodynamic experiment is one that is designed to test the feasibility of using orbiting craft, whether manned or unmanned, to detect large scale gravity anomalies beneath the Earth's crust. Such anomalies generally occur along fault lines and the scientific investigators for the geodynamics and another the Doppler tracking experiment believe that future spacecraft can be employed to better map the fault structure of the Earth's mantle. This being a result of the recently implemented plate tectonic theory among geologists. Other than the conference on the probe, very little activity here in Mission Control. No other anomalies that have not been solved have cropped up - very quite evening. Our next status report will be at 22:40 ground elapsed time. At 21:40, this is Apollo Control.

END OF TAPE

ASTP (USA) MC104/1  
Time: 06:03 CDT, 22:43 GET  
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PAO                    22 hours 43 minutes ground elapsed time, this is Apollo Control. Soyuz is presently on orbit 16, in the Pacific Ocean west of South America. Apollo on orbit 10, just northwest of Hawaii. Less than 2 hours away from crew wakeup for the Apollo. Ground planners here at Mission Control, Houston, still working - fine tuning the procedures for the probe reconfiguration work. They've got to get the crew to work tomorrow to get that probe out of the way, so that they can go ahead and perform the docking module checkout which is planned for later on in the day. According to flight director Don Puddy, however, he wouldn't be the slightest bit surprised if the crew hadn't already solved this problem before they went to bed, just failing to inform the ground team here. So it just may turn out that Mission Control people spent all night worrying for nothing. One of the experiments planned for the multi-purpose furnace tomorrow - the first time the furnace will be used for this mission - is called MAO-14 surface tension induced convection. It's a rather interesting experiment in that, up to this point, most of the investigators that have been proposing the use of furnaces in zero gravity conditions have talked a great deal about the advantages of having no gravity. Well, the scientific investigator for this experiment, Dr. Richard Reed, who works for the Oak Ridge National Labs in Tennessee, is suggesting that, once you eliminate gravity as a problem, you then will have surface tension problems. And so this experiment is designed to detect what kind of surface tension operates in zero gravity and if, indeed, surface tension will turn out to be as much of a problem as gravity appears to be for certain experiments on Earth. Our next status report is scheduled for 23:40 ground elapsed time. At that time the crew will be about 50 minutes away from wakeup. At 22:45, this is Apollo Control.

END OF TAPE

ASTP (USA) MC105/1  
Time: 07:00 CDT, 23:40 GET  
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PAO 23 hours, 40 minutes ground elapsed time. This is Apollo Control. Soyuz spacecraft presently on their orbit revolution number 17 and over western USSR right now. Apollo, on orbit revolution number 11, presently right over Central Africa. Like to clarify a misunderstanding which may have risen from an earlier announcement that we had concerning the resolution of the probe problem. We had mentioned earlier that Flight Director Puddy, considered the problem to be of such a nature that it was entirely likely that the crew had gone ahead and removed the probe during the night and had not notified Houston because of the simplicity of the fix. Now this is not, in fact, known, it's just conjecture from the Flight Director. The problem itself would involved about 20 minutes worth of work - to remove a cover plate on the central piston of the probe assembly and then to realign one of the pyro electrical connectors which appears to be blocking the access for the tool, which is normally used to unlatch the capture latches. A very simple fix. That procedure will be given to the crew in just about 50 minutes crew wake-up over Vanguard. Breakfast for the crew today consists of scrambled eggs and bacon wafers and strawberries for Tom Stafford. And something called Natural creal with strawberries, grapefruit crystals, for Vance Brand, and scrambled eggs, sausage patties, and strawberries for Deke Slayton. The Soviets are presently awake. In about 4 minutes before scheduled Apollo crew member wake up time, the Soyuz spacecraft will undergo a circularization maneuver which will bring their spacecraft to an orbital altitude of 225 miles apogee by 225, excuse me, kilometers apogee by 225 kilometers perigee. Apollo is scheduled for phase maneuver later on today. Sometime around 3 o'clock this afternoon at ground elapsed time of 32:21. We're expecting wake-up music over Vanguard. Although it may not be necessary, the crew is scheduled for just about 30 minutes worth of post sleep activity before their wake-up call at Vanguard, so the wake-up music probably won't wake them up. We'll be back up just before crew wake-up time, about 48 minutes from now. At GET 23:43 this is Apollo Control.

END OF TAPE

ASTP (USA) MC106/1  
Time: 07:49 CDT, 24:24 GET  
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PAO Good morning. 24 hours, 24 minutes ground elapsed time. This is Apollo Control. Apollo presently less than two minutes away from acquisition through the tracking ship Vanguard - this being the wake up pass. Crew already scheduled to have been awake for about 3 minutes though. We expect some wake up music from flight director Don Putty. Also, we have scheduled at 9:30 a change of shift briefing with flight director Don Putty. Pete Frank, the on coming flight director, is already here in Mission Control and his CAP COMM Dick Truly also present. The crew is scheduled to have breakfast following their wake up call and the way things are planned presently here in Mission Control, the procedure for implementing that docking probe-fix procedure will be called up to the crew immediately following their breakfast. That fix procedure is probably about 40 minutes away from being implemented - expected to be something like a 20 minute procedure calls for removing a stainless steel cover and then repositioning 1 of 4 pyro electrical connectors, then reinstalling the cover and then using the handle which is normally used to retract the capture latches. Very simple procedure. It's been worked out here in mission control by several people - gone through the procedure and no - no hang ups have been noted. Nobody seems to think that the problem is beyond a simple repair. We'll keep the line opened for acquisition through Vanguard.

(Music by a group Chicago entitled "Good Morning Sunshine")

CC-M Good morning Apollo. We're talking at you through the Vanguard. Got you for 5 more minutes.

ACDR Hello down there, you reading us?

CC-M That's affirmative Tom. Good morning.

DMP Hello there. This is Deke (Russian).

CC-M Oh (Russian). Good morning Deke.

DMP Mighty pleasant wake up music.

CC-M You guys up and moving around yet?

ACDR No. We weren't until you called.

CC-M Well that's good, glad you're getting plenty of sleep. The - as soon as you get the sleep rubbed out of your eyes I have a couple items for - before we go over the hill here to make sure that we got good COMM at the next ATS pass.

ACDR Okay. Give me about ten seconds and I'll take it.

CC-M Okay. No I just - you don't need to write it down or anything I just want to talk to you but we got about 3 or 4 minutes here so no rush.

ACDR Okay. Go ahead.

CC-M Okay. When you get in and take a look at your flight plan this morning, you'll notice that the normal stuff scheduled under the AC for terminating the general monitor and then proceeding on down to a VERB 49 maneuver - and it's listed at 24:00 hours. We'd like to make sure that we do get that maneuver in prior to our scheduled acquisition at - of the ATS which is scheduled for 24:50 and it is currently 24:30.

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USA (Garble)

CC-M Okay. We're a couple of minutes from LOS and next station contact will be through the ATS at 24:48. I might remind you, this morning, it's called out for you to take the waste storage vent valve to VENT and due to the problems we had with the urine dump yesterday - we recommend that you delay that until you guys are finished using the facilities. Also, we'd like to hear how they're working a little bit later on.

ACDR Okay. It's okay - I guess the last time I tried it last night (garble).

PAO Loss of signal through the Vanguard tracking ship. Acquisition 15 minutes away through the ATS satellite. CAP COMM Crippen reminding the crew that they have to make a few configuration changes on some switches to make sure that acquisition is actually acquired through ATS. A report from the Soyuz - they're cir- -

END OF TAPE

ASTP (USA) MC107/1

Time: 08:08 CDT, 24:47 GET

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PAO Acquisition is actually acquired through ATS. A report from the Soyuz. Their circularization maneuver a couple of moments ago resulted in an orbital altitude of 225.5 kilometers apogee 222.7 kilometers perigee, at an inclination of 51 degrees 79 minutes. At 24:34 ground elapsed time, this is Apollo Control.

PAO 24 hours 47 minutes ground elapsed time. This is Apollo Control. Apollo presently over southernmost South America, and about 30 seconds away from acquisition through the ATS satellite. We'll hold the line up, now, for this ATS pass.

END OF TAPE

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Time: 08:13 CDT, 24:52 GET  
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CC-H Apollo, Houston. Talking at you through the ATS  
for 45 minutes.

CC-H Apollo, Houston. AOS through the ATS for 45 minutes.

DMP Roger. Read you 5 by (garble).

DMP Houston, how do you read?

CC-H Read you loud and clear, Deke.

DMP Thank you.

CC-H Okay. How are things going up there this morning?

DMP (Garble) since we woke up.

CC-H Deke, I'm sorry. You're - You're barely readable.

DMP Is that any better?

CC-H Oh, yes. Much.

DMP Okay; I'm going to get my mike in closer again.

CC-H Appreciate it.

CC-H So you guys are trying to get everything pulled together this morning. We've done a little investigating into the problem Vance ran into with the probe last night and the flight team basically came up with - we know what to do about it and know what the problem is, so whenever everybody gets all pulled together, we can talk about that a little bit.

DMP Okay, that's encouraging. Stand by. (Garble)  
breakfast (garble).

CC-H Okay. There's no rush at all. You guys get your morning business taken care of and one other item for the morning, we'll - some time when you get it all pulled together - we'll need the morning status report, too.

DMP Well, I can give you that right now since we're talking about it. Just a second.

CC-H Okay. You're getting kind of far away from that tube again.

DMP Okay, ready for status, Dick - -

CC-H Ready to copy.

DMP You read me now?

CC-H Yes, sir. Read you loud and clear. Go ahead.

DMP Okay. I'll give you a status report on the AC. He ate everything except - let's see here - one shortbread - 3 shortbread cookies. Comment: all the cookies were crumbly; uneatable(sic). Then, as far as PRD's got a 1 - 001; about 7:15 sleep - good; no medication; and he's full of water.

CC-H I didn't copy that about the water.

DMP Okay. CP ate everything except fruit cocktail and had a lemonade in addition. He couldn't find it; that's the reason he didn't eat it. And his PRD is reading 480 and he had about 7 hours of sleep; the estimate is fair; and he took two soap decks yesterday. Yeah, that was strictly prophylactic, we shouldn't have told it to you. He had no symptoms at all and didn't have any indication that he really needed them, but he just took them for advice. And fluids, he estimates about 50 seconds on the water gun. Okay, and the DP ate everything but the steak yesterday. And the PRD reads 1001; and sleep hard to guess, 5 to



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DMP 6 hours of super sleep; no medication; and water, I don't know, 14-16 gulps, I guess. Anything else you need?

CC-H Okay. The only thing I missed there was Tom's fluid intake. Would you repeat that again, please?

DMP Yeah. He's full of water.

CC-H Full of water. Understand.

CC-H DP, Houston. Just to make sure if we understand on those PRD's, we need five digit indications and can we assume that there were zeroes in front of that, or what?

DMP You were cut out by Moscow. Could you give me that one again?

CC-H Okay. We under - we need five digit indications on the PRD's, and can we assume there were zeroes in front of those numbers that you read me this morning?

DMP Well, I thought there was a 6 in front of mine. Stand by and I'll see if the other guys have anything else.

CC-H Okay. Appreciate it if you would go back and take a look at those and we do need the - all 6 digits, please. I'm sorry. All 5 digits.

END OF TAPE

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DMP Houston, we're getting an awful lot of (garble) of the comm texture of the ATS. Having trouble reading you. Okay. Crip, if you're still reading, you can put a 1 in front of Tom's reading on the PRD.

CC-H How do you read me now, Deke?

DMP Read you okay.

CC-H Okay, fine. I just copied a one in front of Tom's reading and I need to get also clarification on Vance's and yours and we had a drop out there momentarily through the ATS. We're back with you good now.

DMP What happened is we had a couple of comm techs between some place and Moscow yakking away there for awhile. (Garble).

CC-H We're working on that; squared away.

DMP Okay, Crip. How do you read?

CC-H Reading you loud and clear, Deke.

DMP Okay. Vance's PRD is 48029.

CC-H Okay. 48029.

DMP That's affirm.

CC-H Okay. And I'm standing by for yours.

DMP Oh, I thought I gave you five.

CC-H All right, you said you thought it was a six.

Can I - is that correct?

DMP I'll look at it again. Yes, it still looks like a six.

CC-H Okay, understand; 61001.

DMP Right.

CC-H Okay. I guess that's got all that.

DMP We're trying to get going on a BATT A charge here.

CC-H Okay, fine. Incidentally, a while ago when we dropped out of ATS, we - there were two things there I guess - I guess we've got a little problem and that everytime we change a mode down here to set up for a tape recorder dumped a few other things, we're going to lose you briefly through the ATS on voice and I'm going - We'll try to give you a call and let you know that's going to occur but what you were hearing on the comm techs was not supposed to occur and we are going to try to square that away.

DMP Okay, Crip. We're charging the BATT here and I've reached about 2 and a quarter amps but only 33 volts.

CC-H I copy. 2.4 AMPS and 33 VOLTS?

DMP Actually, about 2.2 - 2.3 amps. According to the voltage should be higher than that.

CC-H Okay. I'm being informed here, Deke, that it's going to start up slow and be that way about 15 or 20 minutes and it'll come up.

DMP Okay. And also Crip, we're going to turn on the secondary (garble) It's still pretty warm and try to get things cooled off a little.

CC-H Okay. I understand. You did activate the secondary evaporator? Or did not?

DMP We haven't yet but we are going to.

CC-H Okay. We'd better take a look at that for a mintue and get back with you, Deke.

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Time: 08:22 CDT, 25:02 GET  
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DMP Okay.  
CC-H DP, Houston, you got a GO on going ahead and activating the secondary evaporator.  
DMP Okay, thank you.  
CC-H Incidentally, Deke, last night I guess Bo called to you about hooking up suit hoses to the VTR and the ATS S-band equipment and we saw that still setting fairly warm last night. We assumed that that was done. Is that correct?  
DMP Yea, you are right, that wasn't done. I guess we have got distracted with the probe business up there.  
CC-H Okay. No big sweat. I guess we'll - we going to get later is to get you to hook the hose up to the VTR and hold up on the S-band in that we are going to need the other two hoses for mixing with the Docking Module later on.  
DMP Okay.  
CC-H And when ya'll do have an opportunity to hook that up, if you'll give us a status report on that you have done it, we'd appreciate it.  
DMP Okay. (Garble) things up here, Crip, that are eating our lunch, you know, like it took us about 2 hours to eat last night. Just all the folderol involved in that.  
CC-H Yea, I appreciate that, yea. Getting it all squared away initially is going to do it. I assume this upcoming breakfast is probably going to take a little time too, so don't let us get in your hair.  
DMP Okay, thank you.

END OF TAPE

ASTP (USA) MCL10/1  
Time: 25:12 GET, 08:44 CDT  
7/16/75

ACDR We now have a strawberry colored spacecraft (purple)  
bug break.  
MCC-H Ah hah - spill much?  
ACDR Doesn't take much up here to seem like a lot.  
MCC-H Understand.  
MCC-H Just what you need to make your day, right?  
ACDR That ought to get her off to a good start.  
MCC-H Incidentally, your friends up there just got  
off their circ burn and it's all in good shape, so they're in  
orbit waiting for you.  
ACDR Superb. Great.  
ACDR Incidentally, it takes an awful lot to spoil your day  
up here, Crip.  
MCC-H I would imagine. Feel pretty good?  
ACDR Can't - better believe it, never felt better.  
DMP May be something better but it's been so long since  
I've seen it, I couldn't really tell you.  
MCC-H Roger, that.  
MCC-H Apollo, Houston. We'd kind of like to get a  
status report here about - when you might like to talk about this  
probe problem and consider working it. I know you're - kind of busy  
having breakfast there, can you talk about those a few, now?  
ACDR Yeah, we can listen, Crip, if we don't have to  
write anything down here.  
MCC-H Okay, well why don't I just talk here at first,  
I don't believe it's going to be necessary for you to write anything  
down and maybe we can go over a little bit later and jot down some specific  
steps.  
ACDR Okay, go ahead.  
MCC-H Okay, per Vance's description last night  
of the problem, we went back and did some investigation and sure  
enough we turned up some closeout photos that show one of the, indeed,  
one of the connectors is sitting over your connection point for your  
tools to release the capture latches. And, what Vance had suggested about  
getting that cover off and going in there and correcting it seems like  
the prudent way to go. You're going to have to go ahead and get the  
probe - jacket back out though to be able to assess the area good.  
And, there is one little nut down on the side of the pyro cover that  
has to be removed and you can get - get at that with your ratchet W,  
and socket number 1. And it doesn't look like much of a problem to get  
it off. I'm sure Vance probably remembers that once - you get that  
nut off to release the covers, you got to squeeze it together, and it  
takes a pretty good squeeze to - to squeeze it, and then pull it out.  
But that doesn't look like much of a problem at all. We're -  
once we get in there, we'd kind of like to verify the color of dots with  
the connectors to make sure we know which one's connected to where,  
since we have got the problem, but we're pretty sure that - which  
connector it is - which was the - red one, which according to  
procedures, should have been the one that was fired on the - the  
docking. So it looks like the used one is the one that's the  
problem. Now, if that is the problem, that particular connector looks

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like it might be a little bit difficult to get in and release. And if it is, there is one right beside it, which is the yellow dot connector that can - you got a little bit more access to, and it can be pulled off to allow you to rotate the red, back around out of the road and then reinstall the yellow one. But - I think we can probably leave some of that to your disgression. When you get in there, take a look at it, see how - see how the (garble) you can get a hold of. Remind you, you've got to get the plyers, which is part of that pin straightener kit. If you think you need those to work on it, we do want, after we get it all squared away, we would like to get it back reinstalled - so that we've got a working probe just in case we do need it for something a little bit later on. However, that red connector, if it's any problem reinstalling it, it does not have to be reinstalled and - all you can do is - just tape it securely out of the road so that it won't interfere when we're retracting the probe.

END OF TAPE

ASTP (USA) MC111/1  
Time: 08:49 CDT, 25:29 GET  
7/16/75

CC-H DP, Houston. Deke, when it's convenient with  
you, give us a readout on the battery charge current voltage, please.

DMP 37.6.

CC-H 37.6 on the voltage - what was the AMP, please?

DMP 2.1.

CC-H 2.1.

DMP Roger.

CC-H Thanks very much. That allows EECOM down here  
to keep a pretty good idea of what your battery status is.

CC-H Apollo, Houston. I'm going to lose you on ATS,  
here, shortly. And we'll pick you up through Guam in about 4-1/2  
minutes. Little reminder, when you get a chance there to - we got a  
P52 that's scheduled for about now, and - probably need to pick it up  
pretty soon because, toward the end of this night period, you're over  
- rolled over, looking at the Earth, and it's not too good an attitude.  
Also, when somebody gets a chance, we'd like - we think the battery  
vent valve was closed last night. And we need to get that opened, if  
it is. And also, if everybody's finished with their morning chores,  
well - the waste stowage vent valve can go to VENT.

END OF TAPE

ASTP (USA) MC112/1  
Time: 09:00 CDT, 05:40 GET  
7/16/75

CC-H Apollo, Houston. We are AOS through Guam for 7 minutes. We see the P52 in progress.

CMP Roger, Crip - and we're doing the P52.

CC-H Roger that Vance.

CMP All right, Crip. Are you getting data on our P52?

CC-H We're looking at it. That's fine.

CMP Okay. Then we won't give you the report; we'll just let you watch it.

CC-H That'll be good, Vance.

CMP There's your NOUN 93's.

CC-H Okie doke.

CMP Okay. Turn 254320.

CC-H Roger.

CC-H Apollo, Houston. For the CP: As soon as you finish up with that P52 you can get back to crew and you can give us ACCEPT. We'll go ahead and uplink you to the state vectors.

CMP Roger. And we ACCEPT them.

CMP Houston, Apollo.

CC-H Go ahead.

CMP On this probe thing, Crip, do perhaps you want me to start working on it before we hit ATS or would you rather have us do it over ATS?

CC-H Vance, what we'd recommend is you go ahead and press into it and then if you have any problems we can work them when we get to the ATS coverage.

CMP Sounds like a good idea.

CC-H Apollo, Houston. We're one minute from LOS. We have the state vectors so you can go back to BLOCKED. Our next station contact will be through Santiago in 32 minutes at 26:19. That's 26:19. I'll be saying good morning to you and turning you over to Richard. He'll be talking to you there. We'll see you in the morning.

CMP Okay, Crip. Real good. Nice talking with you.

CC-H Roger.

CMP Back to BLOCKED.

CC-H Roger that.

PAO This is Apollo Control. 25 hours, 48 minutes into the Apollo/Soyuz mission. Loss of signal through the Guam tracking station. We're estimating a change of shift briefing with the offgoing flight director Don Puddy in the main auditorium at JSC at approximately 9:30 central time. Meanwhile, the Soyuz crew is reported in normal execution of their circularization maneuver - circularizing the Soyuz orbit at 225 kilometers or 121.36 nautical miles. The next Apollo maneuver will be later on today. About 7 hours from now, the Apollo phasing maneuver at ground elapsed time 32 hours, 43 minutes and 40 seconds - 7.9 feet per second, which should put Apollo into an orbit measuring 91.7 by 125.6 nautical miles. The flight crew gave their morning status report, list of foods not eaten. There was one comment that the cookies were crumbly. I suppose we ought to refrain from any mention of how - that's the way the cookie crumbles, at this time.

ASTP (USA) MC112/2  
Time: 09:00 CDT, 05:40 GET  
7/16/75

Next station, in 28 minutes, will be Santiago, Chile - and, of course, the ATS-6 satellite which is providing extremely clear communications with the spacecraft. We'll return at that time. This is Apollo Control at 25:50 ground elapsed time.

END OF TAPE

4



ASTP (USA) MC113/1  
Time: 09:59 CDT, 26:39 GET  
7/16/75

PAO                    This is Apollo Control. At the conclusion of the press conference we join the current ATS-6 satellite pass which has 37 minutes remaining and at LOS we will play back the front part of this pass. Vance Brand is now well under way in correcting the probe problem. He has the cap back on. The affending connector for the pyro squib which fires the nitrogen bottle has been out of the way. He's going to tape it out of --

CC-H                    Position of that EVAP protects us against sensor failure. Since, if you guys can put up with the temperatures we are not planning on activateing it - and deactivating it - at least very often for the next several hours. What we appreciate would be just go ahead and turn it off and if we do it just this once, it shouldn't bug us for awhile.

DMP                    Okay.

CC-H                    Also, we are getting ready to go into a TV mode - TV down link mode on the ATS that you ought to be aware of and as we change modes, we'll probably drop out comm here for just a second and we'll be getting TV so maybe we can see the strawberry colored spacecraft.

DMP                    Okay.

CC-H                    Apollo, Houston. Has the probe removal allowed you to the TV prep yet? Or is that not complete?

USA                    That's not complete. We'll get on it.

CC-H                    Okay, fine. When you get it done, why don't you let us know and we'll down link the TV then.

CC-H                    Apollo, Houston. We see the secondary (garble) you haven't had time yet to go ahead and deactivate secondary EVAP. We need to go ahead and get it OFF so we can stop losing water in the waste water tank.

CMP                    Okay. We're just finishing tieing in the probe and drogue and we'll drop that and get it right away.

CC-H                    Okay, Vance. Sorry to bug you but we're - the sooner we get it off, less time we'll have to leave it OFF.

DMP                    Okay, we're going to reset, Dick, on the secondary and I assume you want the pump off too, right?

CC-H                    Stand by. No Deke, we want to leave the pump ON because we are getting some cooling help out of the loop but we do want to deactivate the evaporator and also down on 382 to get that valve that is hard to get to, to OFF.

DMP                    Okay.

END OF TAPE