

ASTP (USA) MC465/1  
Time: 20:57 CDT, 133:30 GET  
7/20/75

PAO Apollo Control. Ground elapsed time 133 hours and 30 minutes. Acquisition coming through Rosman tracking station in 55 seconds. And - - we'll hold the line up for Cap Comm, Dick Truly. Flight director is Neil Hutchinson.

CC-H Apollo, Houston. We're AOS and if you'll give us ACCEPT, we'll continue in giving your our uplinks for the evening.

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

ACDR Roger. Dick, how do you read?

CC-H Loud and clear, Tom. And if you'll give us ACCEPT we'll continue giving you the evening uplinks.

ACDR Got it. Had one problem with the VTR, we got the DM height measurements, but every time we hit the tape motor drive we'd get a green light, when it went to the record both of - the green, the tape motor drive would go out. We did a rewind and it was reading 555 and did a rewind forward and just for a second it went to 1800 and some. Vance will talk to you in just a second here.

CC-H Okay. We've got the right people listening so we're standing by.

CMP Y a. Well, all told we didn't use the - the jar more than 10 minutes probably. Deke turned it on for us and when he turned it on it all worked right, both the headwheel drive and the record light came on. And then sometime later when we were changing personnel in the measurement Tom noticed that both lights were out. At that point we talked it over and decided we'd rewind it just for a second or two to see what happened. Hit the headwheel drive, then rewind, then OFF again. And 50 on the meter up to 1800 and 50 some, I believe.

CC-H Okay. Stand by just a second, hang on.

CC-H Apollo, Houston. One question for Deke about the VTR. Is there any chance that he recalls what the tape position indicator was reading when he turned the VTR on the first time?

DMP Unfortunately, Dick, I didn't look at it.

CC-H Okay. No problem.

CC-H Apollo, Houston. We're about a minute from LOS and we'll be seeing you when you get locked up on the ATS.

USA Okay.

CC-H And Apollo, Houston. We didn't quite get our loads in, if you'll leave it into ACCEPT, we'll finish when we get locked up on the ATS.

ACDR Okay, roger.

PAO Apollo Control. Ground elapsed time 133 hours 40 40 minutes. Loss of signal through Rosman tracking station. Next acquisition will be 1 minute 20 seconds through the ATS 6 satellite. Vance Brand describing the problems the crew is experiencing in having the video tape recorder operational during the - the DM height measurements, which were conducted by the crew. Measurements inside the docking module. This is information which will be used in the design and operation of the Shuttle orbiter. Flight director, Neil Hutchinson,

ASTP (USA) MC465/2

Time: 20:57 CDT, 133:30 GET

7/20/75

presently looking over drawings with his ENCO officer here.

END OF TAPE

ASTP (USA) MC466/1

Time: 21:02 CDT, 133:40 GET

7/20/75

PAO - - shuttle orbiter. Our flight director, Neil Hutchinson, presently looking over drawings with his INCO officer here, attempt to determine what the problem is with the video tape recorder onboard Apollo. Next acquisition in 30 seconds. We'll hold the line up for Cap comm Dick Truly.

CC-H Apollo, Houston, through the satellite.

CMP Loud and clear, Dick.

CC-H Okay.

CMP Just having supper.

CC-H Okay. Real fine. Incidentally, we're having some comm problems in our ground gear. We do have air-to-ground voice, and I'm assuming we're going to keep it.

ACDR Hey Dick, Tom.

CC-H Go ahead.

ACDR What do we hear from Overmyer these days in Moscow?

CC-H Well, as a matter of fact, I haven't talked to him this afternoon. Of course I kept in touch with him, talking to him just about all the time when we were - ya'll were docked up and during the rendezvous. I'm not sure when he's leaving - he's going to be on the way back. I'll check.

ACDR Okay. Tell him hello from all of us and we sure appreciate his work, and all those guys who worked at the center over there for us. We haven't forgotten about them.

CC-H Okay. I'm - I was sure you hadn't, and I'll sure pass it to them. They have supported you in mighty long hours over there in the Moscow control center the whole time, as you know, and did a real fine job.

USA You guys don't (garble)

CC-H Thank you. Incidentally guys, either now or after you eat I have some news here if you'd like to hear any of it. No hurry. We still got a good while before bed time.

ACDR Okay. Yes, go ahead now.

CC-H Okay. "Nearly enchanted by the unique encounter in the sky, Pope Paul VI said today, he became one with a multitude of men who watched the feat of Apollo and Soyuz in these days. The Pantiff spoke to a crowd of 5,000 from the Papal Palace in his hilltop resort near Rome. Pope Paul, an admirer of space ventures, told of watching television and scanning the night's sky in the vain hope of having a direct glimpse of you and the Soyuz. He said, "We too, our eyes dazzled by sky light or wide open toward the depths of night time space will shout out long live the heroic men of such a fantastic feat. Man has won and we cannot refrain from foretelling more wonderful advances in the dominance of nature beyond the heavenly sphere. Man will win." Also I have an article - a thing here that points out that except for the Apollo 11 first Moon landing, there are more reporters and press that are here in Houston accredited to cover the Apollo Soyuz space flight than any other space flight in the history of - since we started. With a - -

ACDR Sounds great.

ASTP (USA) MC466/2

Time: 21:02 CDT, 133:40 GET

7/20/75

CC-H Roger. I'd like to just put in my own two cents. I think the press has given you a tremendous coverage - very fair coverage of both you and the Russian compadres. There are several members of Tass that have been here in Houston, and of course we've had a press contingent in Moscow. "With a 10 day European trip coming up, the President relaxed over the weekend playing his favorite sports and getting to see the movie 'Jaws.' It was the last chance for the President to take time off before he departs next Saturday to visit four European capitols and attend the July 30th to August 1st European Security Conference Summit Meeting in Helsinki. The President also faces a busy week ahead in his battles with Congress over oil price controls, and restoring military aid to Turkey. He played 18 holes of golf at Burning Tree Country Club in suburban Maryland, Saturday, then joined Mrs. Ford for a helicopter trip to Camp David in the evening. War split Cyprus observed the first anniversary of its Turkish invasion today with rival rallies and speeches holding out little hope for a settlement of the conflict. Addressing thousands of Greek Cypriots in Nicosia, Cyprus President Makarios vowed an unending struggle until the island was united and free again. Mount Everest in one respect is no longer the world's highest mountain, the Smithsonian Institution scientists say. In fact, if you measure from the center of the Earth it never was, the Smithsonian said in a statement today. The scientists have calculated that Ecuador's Mount Chimborazo - oh, I'm sure I'll get corrected on that pronunciation - situated in the Andes about halfway between Quito and Guaraciel, has a geoidal height of 7,000 feet higher than Mount Everest. Apollo planner Werner von Braun said in an interview today that rocket fuel might provide a clean burning substitute for gasoline in automobiles of the future. An ideal fuel would be pure hydrogen which gives off pure steam, rather than polluting exhaust fumes von Braun told the West German news magazine today. However, hydrogen which powers our large rockets is very difficult to handle. It turns out that Mercedes-Benz has succeeded in building a transportable tank for hydrogen to power experimental autos. The real problem though is that a car just can't go very far on a tank full, von Braun said. In sports the Astros dropped another game today to the New York Mets 10 to 9. The Phillies defeated Cincinnati 11 to 4, while Atlanta beat Montreal in both ends of a doubleheader. The Giants edged the Pirates 2 to 1 and Chicago took Milwaukee 9 to 2. In the American League, Detroit over Kansas City, Oakland beat Baltimore, while Cleveland was defeating California, and the Yankees took Minnesota in the first game of a double-header. And the last thing I have in the news here is also in the sports scene.

END OF TAPE

ASTP MC467/1

Time: 21:12 CDT, 133:50 GET

7/20/75

CC-H - - while Cleveland was defeating California and the Yankees took Minnesota in the first game of a double header. And the last thing I have in the news here is also on the sports scene. It turns out that Ralph and Ignecio scurried down six foot plastic tubes and crawled away with top honors over the weekend in the first Hawaiian cockroach racing festival. Some 2000 persons showed up at the park bandstand near Waikiki Beach to watch the competition sponsored by a local radio station and the city's department of parks and recreation. Darryl Avora (?) 15 years old picked up his champ Ralph at the festival's rent-a-Roach booth. "The one I caught at home was too slow, he explained after Ralph streaked down his tube to victory. Reme Ramacio (?) 15 years old borrowed a roach from a friend to run in the adult competition and christened his competitor Ignacio. He frantically tapped on the tube to urge Ignacio on and his efforts were rewarded when the roach abandoned his initial hesitation and scurried to victory. Avora (?) said that he would keep Ralph as long as possible with an outside chance that there will be a defending champion next year. We'll just have to see how long he lasts. And I like the last line the best. He says "Right now I just want to take him home and show him to my mother."

CMP Sounds like a new sport is born.

CC-H Roger that. We've still got about 45 minutes left here in this ATS pass.

CC-H And Apollo, Houston. We're through with uplinks. You can go back to BLOCK. We're going to be starting the DSE dump so I may drop out on the comm here for just a second.

ACDR You've got BLOCK.

CC-H And Apollo, Houston. I forgot to call you back, but I am go for voice again. I'm standing by.

ACDR Okay, thank you Dick.

CC-H Roger.

END OF TAPE

ASTP (USA) MC468/1  
Time: 21:22 CDT, 134:00 GET  
7/20/75

CC-H Apollo, Houston.  
ACDR Go ahead, Houston.  
CC-H Hey, Tom. I guess you guys are still in the - in your meal, but this is the last pass this evening and what I'd like to - what I'd like to do is go through the things that I have and interrupt you here and then y'all can get back and have it to yourselves. One thing we want to do is go ahead and get the VERB 74 done while guidance is looking at his data, which he is now. And also we would like somebody to go to panel 400, the VTR and turn the power and verify that the POWER switch, the TELEMETRY switch and the INNER LEVER switch are all ON and we're going to look at the data. We think it's possible that we may have been at the end - end of tape there. There have been some reports of the tape position indicator jumping around during testing on the ground.  
ACDR Okay, Dick. I'll go down and do that - right now. You've got the VERB 74.  
CC-H Okay. Another, another something that somebody could be doing, would be give me a battery readouts. And also we'd like the quantity readouts on all 4 quads.  
ACDR Give them battery readout and, Vance, you can give them the quad readout.  
ACDR Okay. I'm down here on the VTR. Dick go ahead.  
CC-H Okay. Well, what we wanted - -  
ACDR All three switches?  
CC-H That's affirmed, all three power switches to ON.  
ACDR Okay. TELEMETRY and the lever of VTR is ON.  
CC-H Okay. Le - -  
ACDR And they read 8888.  
CC-H Okay. We'll be doing some commanding there, Tom. So I may get back to you a little bit later on to do something else, but for right now I don't need anything else down at the VTR.  
ACDR Okay.  
DMP Okay. Dick, you wanted batteries. We got 37 on C, same on BATA and pyro A and B. And you want the others. A is 35.2 and B is 36.6.  
CC-H Okay. I got them and now we'd like a quad readout if we could get it.  
CMP (Garble).  
ACDR Okay, I can get it for you here, Dick. Just a minute.  
CC-H Okay. Real fine, Tom. And incidentally we did verify that we were at the end of tape there on the VTR.  
CMP Okay, and Dick. The quads (sic) quantities are 79, 87, 76, 83.  
CC-H Okay. There's a couple of other things if somebody would get out the flight plan, I've got some a-few minor changes to read up to you that are real early in the morning tomorrow. And also it turns out with this steam duct problem that we have, that we - it's

ASTP (USA) MC468/2  
Time: 21:22 CDT, 134:00 GET  
7/20/75

it's - then it's possible that that could effect the relief capability of the cabin pressure relief valve after looking at some of our drawings and we can, we can - so get an alternate relief capability by throwing two valves down in the docking module. So if somebody could go down in the docking module and throw a couple of them, I'll be glad to read them to you.

DMP Okay, stand by. One.  
CC-H Okay.  
CMP Okay. And I'm ready to copy anything else you might have.  
CC-H Okay. Vance, do you have the flight plan?  
CMP That - that's right.  
CC-H Okay. Turn over to tomorrow morning at a time of 142 hours and 55 minutes, please.  
CMP Okay. I've got it.  
CC-H Okay. There's a P20 option 5, I've got the same change I had before the NOUN 78, second number should be changed. It now reads plus 09 3 balls. I want to change it to read plus 06 3 balls.  
CMP I understand. Change 09 and 3 balls to 06 and 3 balls.  
CC-H Okay. Right below there then, Deke's column at about 143:05, the high gain angles I want to change to pitch minus 7, yaw 323.  
CMP Got it.  
CC-H Okay. And while we're right there, on the next page at 144 hours and 40 minutes, there's also some high gains listed under your column. I want to change them to read pitch minus 10, yaw 229.  
CMP Copy.  
CC-H Okay. Now if you'll turn back a couple of pages. During the sleep period, this is one I'm sure you probably won't need, but say at around 142 hours.  
CMP Okay.  
CC-H It turns out that we've released the ATS satellite during that whole rev, so you're going to have no ATS, so that contingency comm attitude is not going to do you any good if you did need the ATS. Just for you information, the Soyuz - the orbit is right in there at 141 hours and 46 minutes.  
CMP Okay. Yea, that's good to have. Co - 140 hours and how many minutes?  
CC-H Well, let's see. The word I had was a 141 plus 46. I also had a time when they would be on the parachutes, but I didn't write it down right here and I don't have it right now.  
CMP Okay.  
CC-H Okay. How about enter - -  
CMP 141 and 46.  
DMP And (garble), Dick.  
CC-H Okay. Deke, two valves, first on panel 824, the

ASTP (USA) MC468/3  
Time: 21:22 CDT, 134:00 GET  
7/20/75

pressure relief valve reference. I want to put that to VACUUM.

DMP Okay. Pressure relief going to VACUUM.

CC-H Okay. And then on panel 828 to low pressure relief valve to AUTO.

DMP Low pressure relief to AUTO.

CC-H Okay. That's all there is on that one. Let me check down the list and make sure - see what I've missed.

CC-H Okay. One thing that I was real concerned about last night and I'm not sure what exactly what configuration y'all were in, but I gave you a couple of calls. I think you were still up, probably had off your headsets. We - we just wanted to make darn sure that when you do do the presleep checklist that you make sure that - that either somebody is on a headset or that - that one of the speaker boxes, the one probably in the command module I guess, would be turned on with the volumn up and not on full decrease.

CMP Okay. We'll try to make sure. I think we had a good configuration last night. Wasn't aware that you were trying to call.

END OF TAPE



ASTP MC469/1

Time: 21:39 CDT, 134:17 GET

7/20/75

CMP Okay, we'll try to make sure. I think we had a good configuration last night. I wasn't aware that you were trying to call us.

CC-H Well I - I - this morning when you - when Crip woke you up, I was just handing over to him and I - I agree with you - I was pretty sure we did and I heard you get up at the right time but I - right after the scheduled sleep period I did call you and didn't get a response and I just worried about it. And you might write yourself a note - you know in the presleep checklist on page 1-49 the comm configuration is listed there but it says "required for joint operations only." And it has to do with panel 10. You might just delete that joint ops note there, and just put down there "verify speaker box ON or womebody wearing a headset."

CMP Yea, that's - we understand that and that's what we did last night and perhaps the volume wasn't up enough to wake us up.

CC-H Okay, incidently since Tom called a while ago, we talked to the specialist team that's in Moscow, and turns out they'll be departing there on Wednesday. And - which is going to be coming up shortly of course and each heading their own way back to Houston. And they've really appreciated - -

ACDR (Garble)

CC-H - - and they certainly appreciated your words.

ACDR Roger. Thank you for relaying that, Dick.

CC-H Okay.

CC-H Okay, a couple of more minor business things. One thing that we think there might be an outside chance that it might help us getting the steam duct thawed out would be to open up the door that is in front of the LiOH canisters and get a piece of grey tape or something and just leave it open and let some warmer cabin air filter back in there behind - in that area.

USA Okay, that's open up the door - panel 350.

CC-H Okay, and - here's one last note back again on the vis op film. I think you're already quite aware of this but I must tell you anyway. There are three black camera magazines that according to our records - because of past cancellations in the Earth ops, that have extra frames if you haven't already used them. They are CT05, CT06, and CX13.

DMP We were more concerned Dick about the silver camera film and (garble) that since the lost time we talked to you, and we've got about 5 and 1/2 mags of that left. So we need four by our records. We're still in good shape, I think.

CC-H Okay, real fine. We won't worry about it.

DMP Say, Dick, one thing I wanted to tell you. We don't want to bring back one frame unexposed so we're going to shoot up all that bank on - a lot of them will be on outside and just checking for anything they've got in there that couldn't be used for outside using the light meters onboard the cameras. Over.

CC-H Time, I'm not sure I understand the question and

ASTP MC469/2

Time: 21:39 CDT, 134:17 GET

7/20/75

I'd like to make sure I pass it on properly. I realize you are going to try to shoot it all up but say it again, that question please.

DMP Yea, okay. We're going to shoot up all that Nikon film and a lot of it is going to be used for outside viewing and I just wondered if you might check - no nothing time critical - just check tomorrow to see if there is any film that wouldn't be suitable for it, and we're going to be using the light meter onboard the Has - the Nikon.

CC-H Okay - -

DMP (Garble)

CC-H Yes, I understand now and we'll get our camera people to take a look and if they have any advice in the morning we'll get it up to you.

DMP We've got the camera right now for example with a (garble) with ASA 500 film in it which is for the crystal growth of the ZFF. And we're using that also for Earth ops whenever we see something interesting.

CC-H Roger. I understand.

CC-H Incidentally - I - I think I got this up before but, if I didn't it turned out the VTR up once at the end of the tape and INCO has been commanding it and we think probably that that was just - anomaly because of the end of tape condition. We'd like you to leave the VPR power switches ON tonight and we're going to clean off the tape recorder during the evening and it will be all set to go in the morning.

ACDR All righty. Real good. Well leave them on - I guess you could command them off at the end, right ?

CC-H Well, we - we don't mind - the answer to your question, Tom, is no. We can't command the power OFF but we will clean off the tape and leave it at the end - at the beginning and - and we don't mind leaving all three power switches ON all night. No problem.

ACDR Yea, all right, okay.

CC-H Okay, that's the end of my long list. Thanks for putting up with it. We still have about 13 minutes, and I'll be standing by until the end of the ATS pass.

CMP Very good thank you.

CC-H Okay.

ACDR Houston, Apollo.

CC-H Go ahead Tom.

ACDR Yea, what terrain are we crossing over right now?  
Over.

CC-H You're on an ascending pass - at about 10 degrees south and your getting ready to cross the I - the islands out - -

END OF TAPE

ASTP (USA) MC470/1  
Time: 21:49 CDT, 134:27 GET  
7/20/75

USA Houston, Apollo.  
CC-H Go ahead, Tom.  
ACDR Yeah, what terrain are we crossing over right now?  
Over.  
CC-H I - you're on an ascending pass at about 10 degrees south and you're getting ready to cross the I- islands out in Indonesia.  
ACDR Oh, okay.  
CC-H And the pass, after you cross all those islands chains out there Tom, you're gonna be out over the Pacific all the way out and then you'll start a descending pass and cross over the western United States over in Oregon or the state of Washington. And as a matter of fact, you're gonna come fairly close to Houston on your descending pass coming down this way.  
ACDR Okay.  
CC-H Incidentally Tom, one of the nicest things that's happening to our shift on this mission is that the EECOM'S back room has been fixing a real fine meal for us right now and you might not believe it but right now we're having cheese cake in the MOCR.  
ACDR (Garble) (Laughter)  
CMP Didn't know Cy was a cook.  
CC-H Well this is - this is Charlie Dumis' group here.  
ACDR Okay. I didn't know Charlie was either.  
CC-H Well, they have outdone themselves. We ate spaghetti tonight.  
ACDR Al Bean must be around there somewhere.  
CC-H You've guessed it. He's the guy on duty. (Laughter)  
CC-H Apollo, Houston. We're coming up on about 2 minutes before ATS LOS for the last pass of the day. One thing we were curious about was did you ever talk to Soyuz on FM today, this morning?  
CMP No, we didn't Dick. No, never did.  
CC-H Okay.  
CMP Never. We never got cranked up to hear them - mainly because for the first 3 hours we were too busy to think about it and I guess after that, why, we just didn't think we were that close to them.  
CC-H Yeah, okay, well I was just wondering. We had talked about it a little bit yesterday and they're - as far as I know they're doing real fine and they'll be - by the time you wake up in the morning, they'll be safely back home again. Incidentally the wakeup call in the morning is Vanguard at 142:45 which is right at the scheduled time for the end of the sleep period. And we're going to be saying goodnight here, so we'll see you in the morning.  
ACDR Okay.  
CMP Very good, see you in the morning.  
CC-H Okay.  
PAO Apollo Control. Ground elapsed time 134 hours, 37 minutes. Loss of signal through the ATS6 satellite. Cap comm Dick

ASTP (USA) MC470/2  
Time: 21:49 CDT, 134:27 GET  
7/20/75

Truly bidding the crew goodnight at 134:36 minutes. Wakeup time tomorrow, Monday morning is 6:05 central daylight time. At about ground elapsed time 142 hours and 45 minutes. We don't anticipate conversation through this short Guam pass, however we'll leave the line up until we have loss of signal through Guam.

END OF TAPE

ASTP (USA) MC471/1  
Time: 21:59 CDT, 134:37 GET  
7/20/75

PAO                    Next acquisition will be through Goldstone at which time  
the crew will be in their presleep activities. No conversation expected  
on that Goldstone pass. At ground elapsed time 134 hours and 43 minutes,  
this is Apollo control.

END OF TAPE