

ASTP (USA) MISSION MCL7/1  
Time: 09:47 CDT, 14:47 GMT  
7/15/75

KIO (- Control Center. Moscow time 17 hours 55 minutes. The Soyuz spacecraft has been in flight for 2 hours and 35 minutes. The second orbit is now underway. According to the results of the radio trajectory measurements and all the information gathered during the first 2 orbits, the following parameters of the Soyuz spacecraft orbit have been determined: maximum altitude 221.4 kilometers, minimum altitude 186.3 kilometers, orbital period 88.52 minutes, orbital inclination 51.78 degrees. Present time the ballistics groups is resolving the following problems: preliminary calculations of standard ballistical data is being carried out, which is necessary for the operations of all the other support groups in the center. Standard ballistical information contains information on the beginning of each orbit when the equator is being passed by the spacecraft. Also, the - it is necessary to determine the time of entry in - of spacecraft into shadow and exiting from Earth's shadow - also for the globe indicators of the spacecraft attitude. Ballistical experts group is now completing the preliminary calculations for the correction for the - maneuver at the 4th orbit. The time is determined of how long the time - how long the spacecraft can remain in that orbit. Also, calculations for signal acquisition by Soviet stations is being calculated. Also, some other calculations are being made in - at the same time. Data for the orbit and also data for the electronic and additional indicators are being done. The following information is now being given: Moscow time, this shows the central daylight time, number of the orbit, beginning of AOS of Madrid ground station. Time until the next signal acquisition by the ground station is being shown on the electronic display board - digital display board - as well as - the board - also the orbital parameters that we have mentioned earlier.

Ballistic -)

END OF TAPE

A\$TP(USA) MISSION MC18/1  
Time: 10:00 CDT, 15:00 GMT

7/15/75

KIO (- - display board as well as - the board also shows the orbital parameters that we have mentioned earlier. Ballistic group is also preparing proposals for operations for the further - for the remaining portion of the flight. This is Soviet Moscow - Mission Control Center.)

LCC This is Apollo Saturn Launch Control. We're T minus 3 hours, 47 minutes and counting. At this time the close-out crew has reached the pad area, gone up in the elevators, and they are now in the white room preparing to open up the command module. The pad leader is Gunner (?); with him is the backup astronaut, Bob Crippen, who will be entering the spacecraft shortly; NASA Quality Control man, Charlie

(?) nd a Rockwell International command module technician, Don (?). Rockwell International were the manufacturers of the Apollo spacecraft. Meantime back in the Manned Spacecraft Operations Building, the flight crew is preparing to sit down for breakfast; they're scheduled to have the traditional breakfast of steak and eggs, beginning approximately 5 to 10 minutes from this time. T minus 3 hours, 47 minutes

and counting, this is Kennedy Launch Control.

KIO (This is the Soviet Mission Control Center; Moscow time: 18 hours, 05 minutes. In one minute the spacecraft will cross the equator and begin the third orbit. The spacecraft at the present time is over the Atlantic Ocean, over the equator; latitude 31.70 west longitude. According to the program, on the third orbit the test orientation using the angular rate gyros will be finished. After that, there will be a communications session with the Madrid tracking station at 18 hours and 14 minutes, and the next communications sessions will be with - Soviet tracking sessions. After the communication sessions, the cosmonauts, according to their daily schedule, will have dinner. Further on, they will prepare for the first maneuver for orbit formation, which will occur on the fourth orbit. This is Moscow Mission Control Center.)

KIO (This is the Soviet Mission Control Center. In one minute the Soyuz spacecraft will have signal acquisition of the Madrid tracking station if Eupatoria, Dzhusaly, Kolpashevo and Ulan-Ude ground tracking stations.)

USSR (During seven minutes, we dropped our pressure. Now the pressure is 08, according to the (garble). There are no comments on that.)

CC-M (Soyuz, this is Moscow.)

SCDR (Roger.)

CC-M (Did you check the pressure integrity?)

SCDR (Repeat again, please. Did not understand.)

CC-M (Soyuz, this is Moscow. Did you check the pressure integrity of the pressure vacuum meter? Did you register the pressure with closed valves?)

SCDR (Roger. .)

CC-M (Is it tight?)

USSR (We're still trying on Delta V on the urn - on the roll.)

CC-M (Soyuz, this is Apollo, sic). At 8 begin communication with the active group; at 18:18.)

ASTP(USA) MISSION MC18/2  
Time: 10:00 CDT, 15:00 GMT  
7/15/75

SCDR (Roger. Affirmative. 18:18.)  
CC-M (Soyuz, - - )

END OF TAPE

ASTP (USA) MC19/1  
Time: 0:17 CDT, 5:17 GMT  
7/15/75

MCC-M (Soyuz, this is Ilja Liverov(?). How do you read me?)  
SCDR Rad you very well.)

MCC-M (Soyuz, n successful achievement  
of orbit. How do you read me?)

MCC-M (Soyuz, this is Ilja Liverov(?). How do you read me?)

SCDR (We read you.)

LLC (This is Apollo Saturn Launch Cntrol. We're T  
minus 3 hours, 0 minutes and olding. This is a planed old period

scheduled for 54 inutes, 36 seconds duration. If all es as planned,  
we'll be picking up the clock again and moving down to the T inus 15

minute mark, at which time there is another hold and a brief hold also

at the T minus 4 minute mark. 15 minute mark is a 2 minute old and at  
the 4 nute mark - 4 minute hold. For a 5 minute, 24 second hold at  
the 4 minute mark. Flight crew now is in having breakfast. They're  
watching the launch of the Soyuz vehicle. They were not awakened this  
morning until 10:10, so they missed that as it happened in real time.  
They're settling down now to steak and eggs, while astronaut Bob  
Crippen prepares their spacecraft out at the pad. Countdown now in a

planed hold period, T minus 3 hours, 30 minutes and holding. This is  
Kennedy Launch Control.

KIO (We'll launch at 450 of ground elapsed time. The  
wind southwest. Velocity 7 meters per second. Air emperature, 28  
degrees centigrade. Cloud - )

SCDR How did you read?)

MCC-M (We read you well. So we wish you a successful  
continuation of your flight and a happy, a successful meeting with  
the Apollo. How did you read?)

SCDR (We read you well.)

MCC-M (How did you read?)

SCDR (Wait one.)

MCC-M (Soyuz, his s Ilja Liverov(?).

SCDR (Standing by.)

MCC-M The pollo, ow, s aving inner and we're -  
they're showing it on television.)

MCC-M (Soyuz, this is Ilja Liverov(?). We're now nishing  
p here.)

MCC-M (Soyuz, this is Ilja Liverov(?). How do you read me?  
Soyuz, his s Ilja Liverov(?). How do you read? Over.)

MCC-M (Soyuz, his s Ilja Liverov(?). How do you read? Over.)

-M (Soyuz, this is Moscow.)

END OF TAPE

ASTP (USA) MC20/1

Time: 10:25 CDT, 15:25 GET

/15/75

CC-M (Soyuz, Soyuz. This is Moscow.)  
CC-M (Soyuz, this is Moscow.)  
SFE (Moscow, this is Soyuz 2.)  
CC-M (Soyuz 2, we've been calling you for several  
minutes. How do you read?)  
SFE (We didn't have our receiver turned on. We didn't  
have time to turn it on. We wanted - we should have turned it on, yes?)  
CC-M (Soyuz, this is Moscow.)  
CC-M (Soyuz 2. We read you well. How do you read,  
Moscow?)  
USSR (We read you normally.)  
CC-M (u ave to o t - urn n the ransmitter.)  
USSR (We were just busy flying, so we didn't have time.)  
CC-M (How did the test go?)  
USSR (Test? We're now monitoring the conditions of the  
system after the test. At 18:20:52 we gave command to turn off the  
program. There're no comments on operations, so they're all the systems.  
After the maneuver was 13 41 delta V 116.9. Actual time of maneuver  
160 seconds.)  
CC-M (Roger. Time of introduction of delta V, 160  
seconds calculated.)  
USSR ( )  
CC-M (Understand you. Actual time of maneuver.)  
USSR (Roger, we're monitoring delta V.)  
CC-M (Roger.)  
USSR (Moscow, this is Soyuz. For - how does the picture?)  
CC-M (Is something turned on?)  
CC-M (Roger.)  
USSR (There's o (??)?)  
CC-M (There s (?) There are - we have the lines.)  
USSR (Roger.)  
CC-M (Soyuz, this is Moscow. Go ahead and work with  
this n our wn ent.)  
CC-M (Soyuz, this is Moscow. Get ready to receive  
form 7 for maneuver number 1.)  
USSR (Wait one second, please. Tell us what page.)  
CC-M (171.)

ID OF TAPE

ASTP(USA) MISSION MC21/1  
Time: 10:30 CDT, 15:30 GET  
7 5/75

CC-M (Are you ready?)  
SCDR (Ready.)  
CC-M (Form 7 for maneuver number 1, number 3; yaw angle  
180; time, 19:44:00; telemetry, on 2, T program, 20 33 40; Time, (russian)  
20:51:40; Delta V values will be given to you on the next orbit. RPR  
will be entered at 18:28:30. How did you receive?)  
SCDR (Wait 1.)  
SCDR (This is for turning on the program for maneuvers,  
right? On 17.)  
CC-M (Roger.)  
SCDR (Yaw angle, 180; 19:44:00 time; transmitter 2 time,  
20:33:40, (Russian). On the engines, Delta V and Alpha Z will - Alpha Z will  
be entered later. RPR, 18:28:30.)  
CC-M (Right. You have introduced that, but Delta V and  
Alpha Z we have not - we'll give you later. We will transmit this informa-  
tion to you on the next orbit.)  
SCDR (Roger, (garble)  
CC-M (You understood number 3 correctly. Further form 2 for  
the correction, 04. On the back-up engine, orbit 002 and 4; time for  
switching on, 18:43:47. How did you read?)  
SCDR (122, time of the period 88.50; orbit 002 and 4, time  
18:43:48.)  
CC-M (Roger, you got it correctly.)  
CC-M (Next communication sessions - - )  
SCDR (We're ready.)  
CC-M (Over Madrid, 19:47 to 19:54; Moscow, 19:54 to 20:08. How  
did you read?)  
SCDR (Over Madrid, 18:49 to 18:54; Moscow, 24 to 20:08.)

END OF TAPE

ASTP (USA) MC22/1

Time: 10:35 CDT, 15:35 GMT  
/15/75

CC-M (Soyuz, this is Moscow. We have back-up communications  
20:27 to 20:35 through Orroral Valley.)

SCDR (20:27 to 20:35 through Orroral.)

CC-M (Quite right.)

CC-MSoyuz, this is Moscow.

SCDR (Standing by.)

CC-M Can you dictate to us the data from page 139 which  
you had written down.)

CC-M (Before the test pressure dump.)

SCDR (Roger.)

CC-M (This is page 139.)

CC-M (What's there on 139?)

ACDR (Temperature 20.)

SCDR (V2 on the pressure rocket meter.)

SCDR (745 was the pressure.)

CC-M (Roger. 745. Thank you.)

SCDR (On the ground it was 735.9.)

CC-M (Roger.)

SCDR (and, before the pressure dump, it was 885 and 15  
millimeters - 15 millimeters drop in 7 minutes.)

CC-M (Roger, Soyuz. Thank you.)

CC-M (Soyuz, this is Moscow. 6 minutes before the globe

correction.)

End Of Tape

ASTP(USA) MISSION MC23/1  
Time: 10:40 CDT, 5:40 MT

7/15/75

KIO (- - 18 hours, 42 minutes. We are now turning the floor over to a member of the third crew- Aleksander Ivanchenkov,

who will us about the results of making the test - of making the test of the tion systems hird back-up crew ember. The crew, t 17 hours, 46 began o erform a test f he orientation and uidance

s f Soyuz - he ttitude and motion control ystem.

This should show he condition of all systems for automatic nd manual tation of the spacecraft under actual space flight conditions. And hen, on the results of carrying out this test of studying the spacecraft system, it is possible to judge further on on the operating capabilities of the spacecraft and also to judge on the possibilities of carrying out the program. This test is carried out on all space flights and of course, is completely normal, natural type of effort. At 17 - at 17 hours, 46 minutes, we began issuing commands and after that manual orientation of the spacecraft was performed with the Y-axis towards the ground. Orientation was maintained with a yaw angle of 0 - - )

END OF TAPE



ASTP (USA) MC24/1  
Time: 10:49 CDT, 15:49 GMT  
5/75

KIO ( - - y axis toward the ground. Orientation was maintained with a yaw angle of 180. After this, the ionic orientation system was turned on, which should have insured maintaining the attitude of the spacecraft. Excuse, please. The infrared orientation system was turned on, which provided our orbital orientation towards the Earth. After that, the command was issued to turn on ionic orientation, which turned the spacecraft by 180 degrees and then maintained, automatically, the spacecraft with a yaw angle of 180 degrees for braking. After this, the program was switched on. This program provides for a very strictly definite sequence of switching on the various systems aboard the spacecraft and, also, provides for automatic spacecraft orientation. It will also carry out automatic program maneuvers. The program proceeded normally. There are no comments at all about the program. All the program maneuvers also proceeded without any comments on them. And at the end of this test, the command was issued to turn off the programs. The flight is proceeding according to program. The flight is nominal. There are no comments to make about the systems, the spacecraft, or the condition of the crew. This is the end of the mission. This is Moscow Mission Control Center.)

END OF TAPE

ASTP (USA) MC25/1

Time: 10:52 CDT, 15:52 GMT

11/15/75

LCC This is Apollo Saturn launch control. We're at T minus 3 hours thirty minutes and holding. We're scheduled to come out of this hold approximately 12 minutes after 12. This is a planned hold which could have been used to continue our cryogenic loading had we been running behind however that operation went very well and the hold was not needed for that purpose. The flight crew is - have had their breakfast. They're in the Manned Spacecraft Operations building at this time. They'll be departing the Manned Spacecraft Operations building for the pad at 12:37 p. m. eastern daylight time. At this time, out at the pad, astronaut Bob Crippen, the ackup is inside the spacecraft and he's made a variety of switch checks. Here in the firing room, astronaut Karol Bobko has taken his position at the - what's called the stony console. He is the astronaut communicator here in the firing room. Countdown proceeding well at this time. T minus 3 hours, 30 minutes and hold-

. This is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MISSION MC26/1  
Time: 11:10 CDT, 16:10 GMT  
7/15/75

KIO (Moscow time is 19 hours 10 minutes. The Soyuz

spacecraft is - as now been in flight for 3 hours and 50 minutes. At the present time, the spacecraft is in high orbit of the flight. At this side, it is now coming out of earth's shadow over the Pacific Ocean. In accordance with the schedule, the cosmonauts are finishing in real. The engine of the pace : in the first day, all the various (?) in uses which the cosmonauts heat in a special heater which is located in the orbital module.

LCC This is Apollo Saturn Launch Control. We're at T minus minutes - 33 hours 30 minutes and holding. We're just finishing up that plan hold period scheduled to run from 11:18 to - 12:36. So, we'll be coming out of that hold shortly. We do have two more holds scheduled for the countdown. There's a 15-minute adjustment hold at the T minus 5 minute mark. That's a two minute hold and that hold can vary in time somewhat to give us the best trajectory to the orbiting Soyuz. Also, there has been planned a 5 minute 24 second weather avoidance hold down at the minus 4 mark in the countdown. Now that hold will be used if we have good weather; however, if we can see that there is bad weather coming into the area, we would not observe that hold and we'd

continue counting right on down to an early launch time. The countdown proceeded smoothly this morning. The gaseous fuels - liquid oxygen and the first and second stage and liquid hydrogen in the second stage were brought aboard starting at 10:40 this morning and that gaseous fueling was finished up about - little after 10:30. The Soyuz ,

of course, occurred right on time at 8:20 in milliseconds hereafter, and the light crew here at the Kennedy Space - astronauts Stafford,

Brand, and Slayton - were alerted about 10:30. They proceeded to have the traditional breakfast of steak and eggs. We are getting the alert here in the firing room that the countdown clock is about to start. Mark T minus 3 hours 3 minutes and counting. As we were saying, the crew proceeded to their traditional breakfast of steak and eggs this morning, and that was the first opportunity they had to see a re-run of the Soyuz launch which had taken place earlier. Joining them for breakfast this morning was John Young, Ron Evans, Jack Lousman, and also Dave Bauer the training officer. They are right now in the suit room at the Manned Spacecraft Operations Building, changing their spacesuits and they are scheduled to leave the suit room about 12:37 for the trip out of Pd B. The weatherman continues to be cooperative, indicating we should have some scattered clouds in the area but no

nor thunderstorms. We'll be looking for winds from the southeast at 5 to 15 miles per hour. Temperature in the launch area of about 85 degrees

humidity and visibility up to at least 10 miles. Count continuing now at T

minus 9 minutes and counting. This is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MC27/1

Time: 11:25 CDT, 16:25 GMT

7/15/75

LCC This is Apollo Saturn Launch Control. We're T minus 3 hours, 16 minutes and counting. At this time, we're standing by for the astronaut crew to leave the Manned Spacecraft Operations building, where they'll get into a specially designed vehicle which will carry them out to the pad. The trip out to the pad is approximately one of 20 - 20 minutes, may be a little bit less. However, there are large crowds on the highway today between the Manned Spacecraft Operations building and the pad area. These are crowds of people coming out to watch the launch and that astronaut van will have to go through those crowds, so that could be a little bit longer, 20 to 25 minutes to get out to the pad. Accompanying the astronauts will be the astronauts once they arrive at the command module and assisting them into their couches in the command module. We'll stand by at this time and alert you just as soon as the crew leaves the Manned Spacecraft Operations building. They have essentially completed their suiting and we're expecting them to leave momentarily. This is Kennedy Launch Control.

END OF TAPE

FP (USA) MC28/1

Time: 11:30 CDT, 16:30 GMT

7/15/75

LCC This is Apollo Saturn Launch Control. We're at T minus 3 hours, 10 minutes, and counting. And at this time the crew is coming out the door at the Manned Spacecraft Operations building. Tom Stafford, crew commander leading the way, followed by Vance Brand, and Deke Slayton. All three men in their space suits and carrying portable oxygen ventilators. They are being followed by those suit technicians and their training officer, Dave Ballard. Actually, at this time they've left the suit room and are getting in the elevator to go down to the first floor of the Manned Spacecraft Operations building. They'll be coming out at the first floor there and entering their specially equipped astronaut van for the 20 minute ride out to pad B. That's about a seven mile drive to pad B. They've been right on their timeline this morning. They were running just a little bit behind here, leaving the suiting room; up to that point they've been right on schedule. Coming out of the Manned Spacecraft Operations building now, there's a fairly large crowd of people there, waving to them and wishing them good luck. Stafford in the lead, waves back, as does Vance Brand. Spaceworkers cheering them as they get into their van. John Young accompanying them. Van door being closed and they're on their way out to the pad. T minus 3 hours, 9 minutes and counting this is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MC29/1  
Time: 11:33 CDT 16:33 GMT  
7/15/75

KIO (Which will be occurring after the maneuver - have already been reported. On the fourth orbit, the Soyuz spacecraft will get in touch with the following tracking stations: the American tracking station Madrid, from 19 hours, 46 minutes to 19 hours, 53 minutes. After that it will be within communication range of the Soviet tracking stations, Tbilisi, Eupatoria, Djusaly. After that the tracking station, Orroral Valley in Australia and Quito, Ecuador station in South America. This is Moscow Mission Control.)

END OF TAPE

ASTP (USA) MISSION MC30/1

Time: 11:38 CDT, 16:38 GMT  
7/15/75

LCC This is Apollo Saturn Launch Control. We're T minus 3 hours 5 minutes and counting and we're continuing to count toward a 3:50 pm eastern daylight time liftoff. So, we do have two planned built-in holds or planned hold periods between now and launch time. At the T minus 15 minute mark, there's a liftoff adjustment hold of nominally two minutes that can vary somewhat depending on the orbital parameters of the Soyuz but that could be used to give us the best trajectory to the Soyuz. At the T minus 4 minute mark, we will have a hold of 5 minutes 24 seconds duration. That hold was inserted at that time so that if we saw bad weather was on the way; we could launch 5 minutes and 24 seconds early to avoid bad weather. However, that would not give us the best trajectory toward the orbiting Soyuz so we will be hoping that you won't have to use that weather avoidance system and go early. We will be aiming for the 3:50 pm liftoff and at this time the weather appears to be cooperating and there are no plans to go early. Now T minus 3 minutes - 3 hours 4 minutes and counting. This is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MC31/1  
Time: 11:48 CDT, 16:48 GMT  
7/15/75

MCC-M ( - information on performing of manual orientation and transfer to the orbital orientation mode.)

USSR (Moscow, this is Soyuz. Orientation has been completed. Yaw 180. We have orientation. )

MCC-M (Soyuz this is Moscow, Roger. Globe correction performed?)

USSR (Yes, globe correction was performed at the specified time.)

MCC-M (Soyuz, this is Moscow. Understand you. Over.)

USSR You understood it correctly. Everything is normal.

Everything is within the normal range.)

MCC-M (Soyuz this is Moscow. Roger. Over.)

USSR (Soyuz, (Garble))

USSR (We have a lot of noise of some - some kind of noise in our comm system.)

MCC-M (Soyuz, this is Moscow. Roger. Over.)

USSR (Moscow, this is Soyuz. Do you have any data for us?)

MCC-M (Soyuz, this is Moscow. So far, no. We're waiting for your data and for your reports.)

USSR (Everything is normal onboard. We're operating - )

MCC-M (Soyuz, this is Moscow. Could you give us an estimate of the accuracy of mode maintenance?)

USSR (Yes, of course. The accuracy is quite good. Maybe within 1-1/2 degrees range. Good accuracy.)

MCC-M (Soyuz, this is Moscow.)

USSR (Roger. Copy.)

USSR (Do you have any other questions for us?)

MCC-M (Soyuz, this is Moscow. Not so far. Waiting for communication over our ground station.)

USSR (We have our noise squelch systems on, but we still have noise.)

END OF TAPE

ASTP (USA) MISSION MC32/1  
Time: 11:55 CDT, 16:55 GMT  
7/15/75

CC-M (Roger. Roger. Get ready to receive the data for  
maneuver number 1. Ready? Page 171. Ready?)

LCC This is Apollo Saturn Launch Control. We're at T  
minus 2 hours; 47 minutes and counting. At this time the  
astronaut crew has just arrived at pad B at launch complex 39. The  
astronaut van backing up now to the pad area and the crew has not  
yet stepped out of the van. They will get into an elevator for a  
short ride up to the A level of the mobile launch platform, go inside  
the A level which is just below the deck and get into the high speed  
elevators there which will take them up to a 320 foot level of the

mobile launcher. There they cross swing arm number 9 and go into the  
white room area and from the white room area will be inserted into the  
spacecraft. Spacecraft commander Tom Stafford will be the first one to  
enter the spacecraft. He'll move into that center couch and be  
assisted from inside by Bob Crippen, the astronaut backup pilot who  
is already in the spacecraft. And he will also be assisted by suit  
technician Frank Hernandez from the front of the spacecraft. Second  
man to enter will be Deke Slayton and he'll move over to the right

hand side of the spacecraft once he enters. Mean time, Vance Brand  
will stand by back at the elevator area, the 320-foot level. He can  
get quite a good view of flora of the Kennedy Space Center from there  
and if he looks out now he will see some 70 thousand people looking

back up at him from different areas on the Kennedy Space Center.  
Actually hundreds of thousands of people have arrived in this general  
area and are lining the streets and beaches to watch this launch.

They've exited their special van now and gone into the elevator and  
we'll expect them up in the 320 foot level shortly. T minus 2 hours  
45 minutes and counting. This is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MISSION MC33/1  
Time: 11:58 CDT, 16:58 GMT  
7/15/75

CC-M ( - - (Garble) take it off.)  
CC-M (Engine burn will be in daylight.)  
SCDR (We're monitoring you for 2 minutes approximately.)

CC-M (Soyuz 2, take one other radiogram.)  
SFE (Form - without form.)  
CC-M (After completing the maneuver, do a spin on the  
orientation thrusters with an angular rate of 3 degrees per second and  
counterclock - - )

LCC This is apollo Saturn Launch Control. T minus 2  
hours, 44 minutes and counting. At this time the two astronauts, Donald  
K. Slayton and General Tom Stafford, have crossed swing arm number 9  
and they're in the white room now standing by to get ready to enter the  
spacecraft Vance Brand remaining with the suit technician back at the  
320 foot level just outside the elevator. Remaining with Brand is  
suit technician Al Rockford. Frank Fernandez, the other suit technician,  
is over in the white room area joining Gunner Wendt and the other members  
of the close-out crew who will assist the crew in getting into the space-  
craft and then they'll do a babin purge and leak check with the space-  
craft after they've got the astronauts in there and have closed the  
hatch. Everything continuing to move along smoothly at this time; T  
minus 2 hours, 43 minutes and counting. This is Kennedy Launch Control.  
END OF TAPE



ASTP (USA) MISSION MC34/1  
Time: 12:02 CDT. 17:02 GMT  
'15/75

LCC Apollo Saturn Launch Control. We're T minus 2 hours, 40 minutes and counting. At this time, astronaut Tom Stafford is in the spacecraft. He's hooked up his communications. His first communication was to Skip Shovin, the test conductor, back at the Manned Spacecraft Operations building and he said to Skip, "Looks like it's a good day to fly". Skip agreed with that and they continued on with their work inside the spacecraft. They've connected the oxygen and they'll remove the portable oxygen ventilator which Stafford has been using to breath until he got hooked up to the spacecraft oxygen. At this time, Vance Brand's standing outside the hatch and is about to go in, or Deke Slayton rather is standing outside the hatch about to go inside. They have some protective boot covers over their shoes. They removed those, once they get inside, they also remove a protective covering that's over their helmet. This is a plastic type of covering that's removed and then brought outside the spacecraft. The countdown continuing to go well. The crew now standing by back at the 320-foot level by the elevator, consisting of Vance Brand and a suit technician and they'll be coming in - be the last ones in. T minus 2 hours, 39 minutes and counting this is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MC35/1  
Time: 12:05 CDT, 17:05 GMT  
15/75

CC-M ( - knowing the entire list of data which is on  
page 174 and 175 - pressure, the time, et cetera.)

SCDR (Okay.)

CC-M (And also, in accordance to the program on page  
150. So yes, there will be some data there.)

CC-M (Soyuz, this is Moscow. Now the session is coming  
to an end. Have a good flight. And, until we see you at the - hear  
you at the next communications station -

SCDR (Thank you, Moscow. This is Soyuz. We are  
anxiously awaiting the data on the operation of the - .)

KIO (This is Soviet Mission Control Center. The  
communications session with the Soyuz spacecraft has come to an end  
with the Soviet Mission Control Center. During the last communications  
session the Soyuz spacecraft was in the range of the following stations:

American tracking station in Madrid, the Soviet stations - tracking  
stations - Eupatoria, Tbilisi, and Djusaly.)

END OF TAPE

ASTP (USA) MC36/1

Time: 12:08 CDT, 17:08 GMT

7/15/75

LCC This is Apollo Saturn Launch Control. We're at T minus 2 hours, 34 minutes and counting, and at this time Vance Brand coming across swing arm number 9 and he'll be the final one of the three crewmembers to enter the spacecraft; he'll enter into his center couch. This morning the crew received a message from President Ford and I'll read that message to you now. It's to the Soyuz and Apollo crews: "In space. Although others have gone before you, you will be blazing a new trail of international space cooperation. Never before have representatives of two countries lived and worked together in space. It's an historic occasion. I know you are proud to be playing such an important part in it. As you make your final preparations for launching, I cannot help but think how far we have gone in space in such a short period of time. Less than two decades ago, Yuri Gagarin and then John Glenn orbited the Earth, realizing the dreams of Tchaskovki, Goddard and others who believed firmly that men could fly in space. Six years ago next Sunday, Apollo 11 brought the first men to the moon; this mission was followed by the Soviet automatic vehicle, Lunakod. Both brought back samples of the moon surface, as a result of which our knowledge of Earth's closest neighbor has been expanded considerably. Your flight represents another stage in man's effort to further his understanding of his environment. It has already demonstrated something else; that the United States and the Soviet Union can cooperate in such an important endeavor. Since the scientists and specialists of both countries have worked diligently and productively and in a spirit of cooperation to bring us to where we are today. I am heartened by the example of dedication and cooperation you have displayed. I am confident your efforts and example will lead to further cooperation between our two countries. The peoples of the world will be followed - following your flight; an epic joint mission, with interest and enthusiasm. On behalf of the American people, I comment you for your courage and vision and wish you God speed and good luck." And that is from President Ford to the three astronauts. At this time, Vance Brand standing by outside the hatch ready to enter the spacecraft. T minus 2 hours, 32 minutes and counting. This is Kennedy Launch Control.

END OF TAPE

ASTP (USA) MISSION MC37/1  
Time: 12:14 CDT, 17:14 GMT  
7/15/75

LCC This is Apollo Saturn Launch Control. We're 1 minus 2 hours 27 minutes and counting. Vance Brand now being strapped into the spacecraft and as these men get in, there are certain switches which could be bumped and which would not - this would not be detected in the control center back at the Manned Spacecraft Operations Building; there's a special spacecraft control center there. Some switches would cause a noticeable change in configuration and this would be picked up in the control centers. But there are those that wouldn't be noticed. They're running a switch check now with the pilots to ensure that those switches are in the proper configuration. We'll stand by and see if we can pick up any of the conversation with the three astronauts. The protective covers over the helmets at this time being removed from the men - handed from inside the spacecraft where the suit technician is working in the

front end of the spacecraft, and being handed out to the closeout team in the white room. Not much chatter now between the pilots and the control center. They did their switch checks and ran a COMM check when they first got in. We'll stand by and see if they - they'll be running some more checks here shortly. We'll stand by for those.

SPKR Okay. Everybody happy with (garble) helmets at this time?

CMP Yes, okay.

SPKR Okay. High Oz flow?

CMP We've got a high Oz flow.

PAO Gunther Wendt coming on there for just a minute

asking Vance Brand how he was doing. Gunther Wendt's the pad leader - leader of that close-out crew.

ACDR (Garble) my seat belt a little more. It's gotten loose.

PAO And that is Tom Stafford.

SPKR Say it again. I couldn't hear you.

ACDR Yeah, ask Frank to tighten my seat belt.

PAO He's having a little problem with his seat belt.

ACDR Have Frank tighten up my seat belt. I've loosened up quite a bit since I've been in here.

SPKR Okay. We'll tighten it up.

PAO Tom Stafford in referring to Frank Hernandez when he asked Frank to tighten his seat belt a little bit.

ACDR I'll tell you when (garble). There you go - good.

ACDR (Garble) That's good

SPKR Good enough, Tom?

ACDR That's good. Now I feel good.

PAO We have live television from inside the spacecraft

for the first time.

ACDR Go ahead.

SPKR Okay. We have completed sequence 13 4 53(?).

ACDR I understand.

SPKR Right, and (garble).

ASTP (USA) MISSION MC37/2

Time: 12:14 CDT, 17:14 GMT

7/15/75

PAO And that's Gunther Wendt.  
ADCR Okay. You got a go on that. Gunther, I don't  
want any talk on the net while you're doing that.  
SPKR Yea, but go on (garble).  
ACDR Stand by.  
SPKR Okay. Standing by.  
SPKR Okay. QZ on 459? On Van's panel 2 give me a suit  
compressor delta P.

SPKR Roger. Suit compressor - panel - suit compressor  
delta P is up to .9.

SPKR EZ.  
SPKR .75.  
PAO Spacecraft test conductor Skip Chauvin talking to  
Charlie Heffamozer(?)  
SPKR - I'm going to be running a voice check.

SPKR Affirmative. I copy.  
SPKR All right. Back to 456 (garble). Can you verify  
acceptable data?  
USA (Garble)  
SPKR All right, I understand. All right, time flight?  
CMP Go ahead.  
SPKR I (garble) put Chet on the net until flight  
finishes with the voice checks. Sorry, but you've got to go.  
CMP Okay. We'll go.  
PAO Chauvin referring to Flight is Houston Flight

Mission Control Center in Houston.

SPKR Roger. We read the Apollo loud and clear. Good  
morning.  
ACDR Roger.  
DMP I read you about 4 by, Dick, (garble).  
SPKR Hi, Deke. I read you loud and clear. How are  
you flights?  
DMP SEC flight voice checks are go.  
SPKR Alrighty. Vance, how is your VM and VHF levels?  
CMP Yeah, they sound fine, Skip.  
SPKR Okay. Crip, would you go to panle 10 and give me  
the FMS band and VHF thumbwheel (garble) please?  
SPKR Okay. S band is sitting at 6--  
PAO Crip is Bob Crippen, backup astronaut in the  
spacecraft.  
SPKR - - VHF AM is sitting at 7.  
SPKR I understand. Six and seven.

SPKR Power 2 flow.  
SPKR I understand.  
PAO Countdown proceeding now. Billows of - clouds of  
liquid oxygen as it boils off can be seen coming from the vehicle.  
Will continue to top off the liquid oxygen down through the countdown

till the final minutes of the count. Everything continuing well.  
T minus 2 hours 20 minutes and counting. This Kennedy Launch Control.

END OF TAPE

ASTP (USA) MC38/1  
Time: 12:22 CDT, 17:22 GMT  
7/15/75

USA (Garble.)

SPKR Hey, don't let him kid you. He's been sleeping  
in that spacecraft.

USA Right.

USA Okay. What are you reading (garble)?

SPKR Okay. On 6 (garble) 460 we are reading 99 percent  
at 17:22.

SPKR All right. Understand. And looks like the suit  
(garble) is coming up.

SPKR The suit tech has been out of the spacecraft.

SPKR All righty.

SPKR Okay. Now sequence 13,4 - 455, I've got 1.07.

SPKR 455. Thank you, (garble).

SPKR Roger. Readings in 462, 02 flow .72, suit temp 69,  
02 partial pressure .3.

SPKR All right, Walt. You happy?

SPKR Roger, I'm happy.

SPKR All right looks like that (garble) cabin is coming up  
super. Okay, Crip. Panel 10.

SPKR Go ahead.

SPKR Alright. I want the VHF, FM pad comm off.

SPKR VHF, pad comm is off.

SPKR Alright, Crip, you want to grab your little favo-  
rite little VTR cover and see if you can snake it out?

SPKR Okay. We'll do it. You guys have a smooth flight;  
wake you up in the morning.

USA Thanks, Crip, for all the good work. We appreciate it.

USA Sure do, crip.

SPKR Okey-doke.

SPKR Okay. Vance, I've got a few switches for you to check.

CMP Okay.

SPKR On Panel 2 abort systems propellant switch, DUMP AUTO.

CMP Verify. DUMP AUTO.

SPKR Caution 1A, acknowledge.

CMP Acknowledge.

SPKR Mission timer running?

CMP Verify.

SPKR All right on Panel 2. I want you to take your suit  
circuit water accum auto switch to position 1.

CMP One.

SPKR All right. Thank you.

CMP Roger

SPKR All right. Thank you.

SPKR - we have removed the cover and the (garble) has left  
the spacecraft.

MCC-H Understand? All right the protective cover is  
removed, sequence 502B?

SPKR Not yet. Stand by.

SPKR All right. Oh the VTR cover is out.

SPKR Roger, (garble).

SPKR (Garble) protective cover from the hatch counterbalanced?

SPKR It was.

ASTP (USA) MC38/2

Time: 12:22 CDT, 17:22 GMT

7/15/75

SPKR (garble) in 502 has been completed. We have removed the protective cover.

SPKR 22 Sugar.

SPKR That'a boy.

SPKR (garble) close the hatch.

SPKR Roger. Will do.

SPKR Okay. (garble) ready for closing the hatch?

ACDR (Garble.)

SPKR Deke, you

DMP (Garble.)

SPKR Okay, press and hold the lock spin reset button.

ACDR Okay. And Dennis?

SPKR Yeah?

SPKR Okay. You latch the B2 and (garble) locked indicator light and (garble) in the box here (garble). Now set the gear box selector and the actuator handle selector to the unlatched position.

ACDR Gear box is unlatched. And the handle is unlatched.

SPKR Now set the BPC hatch release selector out to BPC jet.

ACDR Release, (garble) BPC jet.

SPKR And can you verify that the gauge pressure of the counterbalance (?) is indicating in the green.

ACDR Yessir. She's in the green.

SPKR STC, pad leader. The hatch has been closed.

SPKR I understand. All right, pad leader, I need a stamp on the purge setup.

SPKR Okay. Standby just a --

SPKR Okay, that's 13 times 10, 22 sugars.

SPKR Okay, (garble) thank you. All right ECS.

SPKR Roger.

SPKR Okay. You go your people, and MNQC will need somebody on panel 227.

SPKR Roger. There they are.

SPKR And Tom, will you take the cabin release right hand valve to dump, please?

ACDR Roger. Cabin release right hand valve is in DUMP.

SPKR All right, thank you.

SPKR All right, MNQC, back to page 111.

SPKR I 463 is verified, GIL 464.

SPKR GMR verifies.

SPKR Understand. All right on panel 3 I want the UP TELEMETRY command switched to normal.

MS (Garble.)

SPKR All fight, I had some cross talk. Did you get it to normal?

USA Yeah, it's normal.

ASTP (USA) MC38/3

Time: 12:22 CDT, 17:22 GMT

7/15/75

SPKR All right, who was calling?  
ACDR Okay, I still (garble) 13504. 22 sugars.

SPKR (garble) too slow. (Garble.) cumulatives.

USA Roger. I got it.  
SPKR Okay, (garble) we got that on the hatch closure.

USA Roger.

SPKR Thank you.

SPKR Okay. Flight, execute Ace G&N uplink disable.

USA Flight, Roger.

SPKR Stand by for an ACE G&N disable on my mark.

3, 2, 1, Mark.

SPKER Okay, G&R instead of VERB 34.

USA And I'll verify we did not get the display.

SPKR All right, flight. Data rate high.

USA Transmitting data rate high. 3, 2, 1 mark.

SPKR C&D verify.

SPKR MTSC verifies.

SPKR I'll verify no change in data rate.

SPKR All right, thank you Bill. All right on panel 2.

The UP TELEMETRY command module, switch to block.

CMP Block.

SPKR All right SCR 472.

SPKR 472 verify.

SPKR All right on panel 8. Tom, can you twist around there?

ACDR Yeah.

SPKR I want your EDS 1 BATT/A, 2 BATT C and 3 BATT B circuit breakers closed.

ACDR (Garble.) Can't verify. Hang on just a minute. (Garble) verified closed.

END OF TAPE