

ASTP (USSR) MISSION SR32/1
Time: 11:59 CDT, 28:39 GET
7/16/75

KIO (This is Soviet Mission Control Center. Moscow time is 19:59. The Soyuz spacecraft has been in flight for 28 hours 39 minutes. The regular comm session was performed between the Soyuz spacecraft and the Moscow Control Center. During this time a TV picture was transmitted and TV commentary by the - Alexey Leonov, the spacecraft commander, was also transmitted about the flight. The crew of the Soyuz spacecraft has performed a great deal of work on monitoring and checking the TV systems in accordance to the recommendations of the Mission Control Center. And, as a result of this, it became possible to carry out this first TV coverage. All the systems of the spacecraft are operating normally. The cosmonauts' physical condition is good. They are very chipper. And the - the operations are proceeding according to the planned program. The next comm session between the spacecraft and the Moscow Mission Control Center will be at 21 hours and 4 minutes. This is Moscow Mission Control.)

KIO (This is Soviet Mission Control. Moscow time is 20 hours 25 minutes. The Soyuz spacecraft is now on the 20th orbit around the earth. The spacecraft is now in a solar - solar spin attitude. At the present time, in accordance with the flight program, the cosmonauts are eating dinner. According to telemetric data, which were received during the comm session, all the systems of the spacecraft are normal. The pressure is 551 mmHg in the descent vehicle. Temperature - 19 degrees Centigrade. Pressure in the orbital module - temperature in the orbital module ... pressure - 560.7 mm in the orbital module. Temperature in the orbital module 19.9 degrees. This is Moscow Mission Control Center.)

KIO (This is Soviet Mission Control Center. Moscow time - 20 hours 36 minutes. The spacecraft is completing its 20th orbit around the Earth. At 20 hours 41 minutes the spacecraft will cross the equator. The predicting parameters for - of the orbit - for the next orbit: 224.5 km maximum altitude; minimum - 221.5 km.; 88.9 minutes - orbital period. Orbital inclination 51 degrees - 51.78 degrees. The crews' program the 21st orbit: monitoring spacecraft systems, maintaining communications personal time, preparation for reports on the program, preparation for TV seance. The next comm session 21 hours 5 minutes. This is Moscow Mission Control Center.)

KIO (This is the Soviet Mission Control Center. Moscow time - 20 hours 54 minutes. The Soyuz spacecraft is on the 21st orbit over the Earth. At 21 hours 5 minutes will be the next comm session between the spacecraft and Moscow through Eupatoria, Tbilisi and Djusaly ground tracking station. During this time, the 21st orbit, there will be trajectory measurement made, telemetry data received, and conversations with the crew. 10 minutes before - remain before the beginning of the zone of coverage. This is Moscow Mission Control Center.)

KIO (This is Soviet Mission Control Center. In 38 seconds the Soyuz spacecraft will enter the zone of coverage of the Soviet Un - Soviet ground stations.)

MCC-M (Hear you excellently.)

USSR (Hear you well.)

MCC-M (Roger.) (Soyuz, Moscow. We have a request to give a - the command Roman-1, Roman-15, and Ann-20.)

USSR (Roman-1. We have that. We have those lights on.)

ASTP (USSR) MISSION SR32/2
Time: 11:59 CDT, 28:39 GET
7/16/75

MCC-M (Roman-1 and Roman-15. How about Ann-20?)
USSR (Ann-20?)
MCC-M (That's the turning-off command.)
USSR (Right. Okay, Ann-20 given.)
MCC-M (Thank you.)
MCC-M (Both Soyuz's. Kavkas will now talk to you.)
USSR (Kavkas, Soyuz hears you.) (Kavkas, this is Soyuz. I
hear you well.)
SALYUT (This is Kavkas. We hear you well, Soyuz.) (At first
we wish you the best of luck in your work. We want everything to be perfect.
And once again I would like to say that it is pleasant - it is very pleasant
for us to hear a few words.)
USSR (Thank you, Pete, for this congratulations, and I con-
gratulate you: first of all as long time residents in space. We're just
beginning to be here, so thank you very much.) (And one other thing. Quite
recently we saw Misha and we went to the lake, we fished, and we even caught
one fish.)
SALYUT (Garble)
MS (Laughter)
SFE (All right, Vitaliy. We are very happy that everything
is okay with you. There's very little time left, and I think that we - we
will - certainly have to meet again back on Earth.) This is Soyuz 2, Valeriy.
SALYUT (I would like to say that your mission is a grandiose
one. We are following it with great attention, and we wish you success and
we want everything to be fine and safe with you. And we certainly hope that
everything will be all right.)
SFE (Vitaliy, thank you very much for your greetings and
congratulations.)
SALYUT (Valeriy, thank you very much. You have a very responsible,
a very serious, task, and, of course, everybody is watching and listening to
you, not just we. Every person on Earth is thinking about what's going on
there, and we are certain that the work will be successful and will end well.
I think that all those who are in space right now are aware that this is a
grand and grandiose task. Of course there are seven people in space right now.)
SPEAKER (That's right.)
SALYUT (This also - these are the "magnificent seven" also.)
(How are things going out there?)
USSR (Everything onboard is normal. How are things out there?)
SALYUT (Everything is fine. Everything is normal. Our station
is working perfectly, and we have become so accustomed that it's just like
home. First we flew a whole month and now the second month is coming to an
end, so it's just like at home.)
USSR (So how is it to work to be old time space residents? We
were following you every day before your launch, and even today we asked
several times how you were going.)
SALYUT (We are following you too, boys. All the time. We even
got up early to - We even got up early to watch your launch. Do you hear me
now? Today we heard you comm several times with the Mission Control Center.
Do you hear me?)

ASTP (USSR) MISSION SR32/3
Time: 11:59 CDT, 28:39 GET
7/16/75

USSR (We are constantly asking, down there, how you are and what you're doing. Maybe we'll see you. We just didn't want to talk to you so as not to disturb anything, but you go ahead and get in touch with us. We're very happy to have that. But, as soon as you have a little time, get in touch with us, of course. It's very pleasant and makes us very happy to talk to you. It's just that you see, that yesterday and today were very busy days. And in addition to doing our normal work, we still had to do some unplanned operations.)

SALYUT (All right. If you need to repair anything go ahead, ask us. Maybe we can help you.)

MCC-M (Very good job fellows.)

USSR (They were giving us advice from the ground about the TV camera and we're repairing it.)

MCC-M (It's a good job.)

USSR (They told us from the ground - they told us that everything is going well. Well, now everything is normal.)

SALYUT (That's good.)

USSR (The main task is still ahead, and we have to get ready for it.)

SALYUT (How do you feel? Normally?)

USSR (Yes, thank you very much. Everything is normal. Everything with you too?)

SALYUT (Yes. Everything is normal.)

USSR (Well, you're getting used to it already.)

SALYUT (Don't worry. Everything will be okay.)

USSR (Very happy to meet you in the - in space. We wish you the most successful work and for the rest of the program. Our time is running - coming to an end.)

SALYUT (Thank you and until we meet again.)

USSR (Moscow, this is Soyuz. How do you read?)

MCC-M (Soyuz, this is Moscow. Excellently.)

USSR (We have performed our correcting pressure dump from the descent vehicle. Initial 550 mm, now we have dumped it to 500 mm. The dumping took 36 minutes. Gradient of the pressure drop was variable. At first 10 minutes, we monitored and there was no change. 319 mm of nitrogen. How did you read?)

MCC-M (We received you, Roger. Thank you.)

USSR (So, everything on board is normal and we're going on.)

MCC-M (Did you do the globe correction?)

USSR (No, I didn't have time to do the globe correction, so at the next orbit give us the globe correction and we'll do it. All right?)

MCC-M (Roger. Wilco.)

USSR (But just before this - Just before this I did a test measurement when we passed over Africa. And it was aboslutely in coincidence!)

END OF TAPE

ASTP (USSR) MISSION SR33/1
Time: 13:12 CDT, 29:52 GET
7/16/75

USSR (So everything on board is normal and we're going on.)
MCC-M (Did you do the globe correction?)
USSR (No, I didn't have time to do the globe correction, so,
at the next orbit give us the globe correction and we'll do it. All right?)
MCC-M (Roger, Wilco.)
USSR (But just before this - just before this I did a test
measurement when we passed over Africa. And it was absolutely in coinci-
dence! When we crossed the coast of Africa, the globe showed the same
thing exactly.)
MCC-M (Roger. Now Soyuz, both of you. We have to give you
a lot of material on forms 14 and 23. If you get ready, we'll give you
form 14 now.) (Soyuz, write down the - copy down the next comm sessions.
Ready?)
MCC-M (Academician Korolev - 22:10 to 22:18. Yuri Gagarin -
22:20 to 22:27. Moscow - 22:35 to 22:44.)
USSR (Roger. Copied.)
USSR (Form 14, page 41 or 42?)
MCC-M (Wait one.) (Ready for 14. The pulse is the same
everywhere. 071. Ready for form 14. How do you read me?)
SFE (Moscow, this is Soyuz 2. Ready for 4 14. - form 14.)
MCC-M (Soyuz 2. This is Moscow.)
SFE (Do you hear me? Normally?)
MCC-M (We hear you normally. Transmitting form 14. Impulse -
071 everywhere. Engine burn - 157 everywhere. Orbit - 022. Time 22:10:51.
Distance - 102. 22nd orbit 0 23:26:38. Distance - 100. 23rd. 00:59:28.
101, 024, 02, 32, 31. 102, 025, 04, 04, 00. 102. I am going to fast?)
SFE (No, it's all right.)
MCC-M (027, 05, 37, 21. 102. 028. 07, 12, 13. 101. 028.
08, 21, 20. 100. 029. 09, 5 - 55, 06. 101. Did you copy?) (The comm
is coming to an end, so we'll give you some more and then take a readback.)
USSR (Right.)
MCC-M (Have a happy flight until we meet again.)
USSR (Did you get form 23?)
MCC-M (Yes, we have practically finished everything. Thank
you for your help.)
USSR (I am very happy that you were able to do it. Thank
you.)

END OF TAPE

ASTP (USSR) MISSION SR34/1
Time: 13:26 CDT, 30:06 GET
7/16/75

KIO (This is Soviet Mission Control Center. Moscow time is 21 hours 25 minutes. The Soyuz spacecraft is - has been in flight for 30 hours and 5 minutes. It is completing its 21st orbit. The regularly scheduled comm session between the spacecraft Soyuz and the Mission Control Center has been held. During this comm session, the crew of the Soyuz spacecraft talked with the crew of the orbital station Salyut 4, Popov and Sevastiyarov. The crews greeted each other in orbit. The crew of the Soyuz spacecraft transmitted a greeting from - from the Earth and their families to the crew of Salyut 4 spacecraft. Further on during the radio communications session the crew of the Soyuz reported a pressure dump to 500 mmHg. The pressure drop took 36 minutes. There are no remarks to make on the health of the cosmonauts. All onboard systems are functioning normally. The work program has been completed in full, and the next orbit will take place accor - in accordance with the nominal program. This is Moscow Mission Control Center.)

KIO (This is the Soviet Mission Control Center. Moscow time is 21 hours 40 minutes. Flight time 30 hours 20 minutes. The Soyuz spacecraft is on the 21st orbit around the Earth. Processing of telemetry data of the last comm session gave the following results: Of the atmosphere parameters, pressure in the descent vehicle 498.3 mmHg, temperature in the descent vehicle 19.1 degrees Centigrade, pressure in the orbital module 503.1 mmHg, temperature in the orbital module 19.9 degrees Centigrade. Pressure in the instrument module 851.4 mmHg, temperature in - 11.4 degrees Centigrade. This is Moscow Mission Control Center.)

KIO (This is the Soviet Mission Control Center. Moscow time is 22 hours; flight time 30 hours 40 minutes. The Soyuz spacecraft is completing its 21st orbit. At the 22nd orbit the following orbital parameters are predicted for the Soyuz spacecraft. Time of crossing the equator - 22 hours 10 minutes Moscow time; maximum altitude of flight - 224.35 km, minimum altitude of flight - 221.36 km, orbital period - 88.9 minutes, orbital inclination to the orbital plane - to the equator - equatorial plane: - 51.78 degrees. The spacecraft will enter shadow at 22 hours 40 minutes and will leave the shadow 23 hours 16 minutes. On its 22nd orbit, the following crew activity program is plan. The crew will communicate with the ground and will have a TV session - television coverage. After the TV coverage, experiments involving the growth of micro-organisms will be done, condensate will be pumped off, and the cosmonauts will have some private time. This is Moscow Mission Control Center.)

KIO (This is the Soviet Mission Control Center. In 50 seconds the Soyuz spacecraft will enter the zone of coverage of the Soviet tracking ship Academician Sergel Korolev.)

MCC-M (How do you read me? Over.)
USSR (Moscow this is Soyuz. I read you well.)
MCC-M (That is good. I read you, too.)
USSR (Let us continue form 14.)
MCC-M (Ready.)
USSR (Orbit 035: 11 27 38 102. 032: 13 00 15.)
MCC-M (13 00 15 - 15.)
USSR (13 00 15, right. 102. 032nd again: 14 21 38.101.
03 3rd - 33rd: 15 53 52.102. 034th: 17 26 24, 102. 035th: 18 53 51,
102. 037:20 25 58, 101. 038: 21 53 46, 102. How did you copy?)

ASTP (USSR) MISSION SR34/2
Time: 13:26 CDT, 30:06 GET
7/16/75

MCC-M (Did you start with the 22nd?)
USSR (Right, right.)
MCC-M (Pulse 071 times 22 10. Distance 102. 22nd: 23 26
38, 100.00 59 28, 101. 124:02 31 31, and no distance given.)
USSR (Distance is 102.)
MCC-M (102. 025: 04 04 00, 102. 027: 09, 102.07 12 13
101. 028: 08 21 20, 12 102. 029: 09 26 ... 102. 030: 11)... 8 102.
032: 13 00 15 102. 032: 14 21 38 101. 033rd: 19 53 5 52 102. 034:
17 26 24 102. 035: 18 53 51 102. 037: 20 55 58 101. 038: 21 53 46 102.
USSR (Roger. You copied correctly.) (Form 23.)
MCC-M (Ready.)
USSR (21st orbit: beginning 20:41:50. Yuri Gagarin, 20:51 -
20:55, Moscow, 21:04-21:15. 21:11 to 21:47, shadow. 22nd: 22:10:46.
Yuri Gagarin, 22:21 to 22:29. Academician Korolev 12 - 22:12-22:20.
Moscow, 22:37 to 22:46. 22:40 to 23:16. 23rd: 23:39:41. Yuri Gagarin,
23:54-00:01. Shadow 009 ... 00:09-00:45. 24th: beginning 01:08:36. Yuri
Gagarin, 01:27-01:34. Shadow 01:38-02:14. 25th: 02:37:30. 03:00-03:08.
Shadow, 03:07-03:43. 026th: Beginning 04:06:25. Yuri Gagarin, 04:32-04:40.
Shadow, 04:36-05:12. 28th: Beginning 07:04:14. Academician Korolev,
07:38-07:45. Moscow, 07:16-07:21. Shadow, 07:34-08:10. 29th: 08:33:09.
Korolev, 09:12-09:16.)

END OF TAPE

ASTP (USSR) MISSION SR35/1
Time: 14:19 CDT, 30:59 GET
7/16/75

USSR (... 21, shadow 07:34-08:10.29th 08:33-09:00. Korolev, 09:12-09:15; Moscow, 08:42-08:54; shadow, 09:03-09:39. Now we are about to finish comm through the Academician Korolev tracking ship and communication over the tracking ship Yuri Gagarin.)

MCC-M (Roger.)

USSR (Further we will continue form 23.)

MCC-M (Soyuz, this is Moscow. You will have TV 3 and 4, 3 and 4, from 22:38:30 until 22:42:20. Preparations on page 166 where are - where the instructions are. Did you copy?)

MCC-M (Soyuz, this is Moscow.)

USSR (We heard you well. We'll continue form 23. Orbit number 30, 10:02:03; Moscow, 7:14-7:27; shadow, 10:32-11:08. 31st - 11:30:57. Moscow, 11:41 to 11:59. Shadow, 12:01 to 12:37. Further on we have almost always Moscow, so I won't even repeat Moscow.)

MCC-M (Roger.)

USSR (32nd - 12:59:51; 13:09-13:31; 13:30-14:06; 33rd.)

MCC-M (Repeat 32 please.)

USSR Beginning: 12:59:51. Moscow, 13:09-13:31; 13:30-14:06, shadow. 33rd. 14:28:44; 14:37-15:01; 14:58-15:35.)

MCC-C (No, that won't work. You'll have to explain what it is. - Yuri Gagarin or what?)

USSR (This is always Moscow. All right, I'll keep saying it. 33rd. 33rd beginning - 14:28:44. Moscow, 14:37-15:01. Shadow, 14:58-15:35. 34. 15:57:38; Moscow, 16:08-16:32; shadow, 16:27-17:03. 35th. 17:26:32; Moscow, 17:41-17:58. Shadow, 17:56-18:32. 36th. 18:55:25. Moscow, 19:14-19:28. Shadow, 19:25-20:01. 37. 20:24:18. Cosmonaut Yuri Gagarin tracking ship, 20:33-20:38. Moscow, 20:47-20:58. Shadow, 20:54-21:30. 38. 21:53:11. Yuri Gagarin ship 22:04-22:4-11. Academician Korolev ship 21:54-22:02. Moscow, 22:20-22:28. Shadow, 22:23-22:59. 39. 23:22:04. Korolev, 23:36-23:48; and shadow, 23:52-00:28. How did you receive us? Over.)

MCC-M (Looks like normally. We are both taking it down. There is no need for you - to give you a readback.)

USSR (Okay.)

MCC-M (Copy this. You will have TV-3 and 4. Beginning 22:38:30, end 22:43:00. Page 166 of the instructions.)

USSR (Tell us when the beginning is. Let us know.)

MCC-M (Of course, we will let you know.)

MCC-M (Soyuz, this is Moscow. You are having a GO for dinner, beginning with the 23rd orbit. 30 minutes before sleep take a phenybutanal tablet. In book number 1. You'll go for eat and sleep period.)

USSR (Thank you.)

MCC-M (Soyuz, this is Moscow. Take Form 2.)

USSR (Number 34. Longitude 53. Period 88.91. Orbit 021.4. Time for switch on - 22:48:51. How did you copy?)

MCC-M (Number 34. Longitude - 53.88, 91. 021, 14. Time for turning on)

USSR (Excellent.)

ASTP (USSR) MISSION SR35/2
Time: 14:19 CDT, 30:59 GET
7/16/75

MCC-M (Form 3. Systems status.)
MCC-M (Page 82. Number 33. On a 21st orbit: the buffer
battery 425 ampere hours, CO₂ - 102 kg of the reaction control engines;
reserve reaction control engines fuel 20 kg. How did you copy?)
USSR (Garble.)
MCC-M (Roger, you copied correctly.)
USSR (We are finishing our comm, until the next time.)
MCC-M (Have a good flight.)

END OF TAPE

ASTP (USSR) MISSION SR36/1
Time: 14:36 CDT, 31:16 GET
7/16/75

KIO (This is Moscow Center talking and in - very shortly the Soyuz will be into AOS of Soviet tracking station.)

MCC-M (Soyuz, this Moscow.)

USSR (Moscow, this Soyuz. We read you clear.)

MCC-M (We have 30 seconds before the beginning of TVA cast.

That is TV cast. In 4 minutes the telemetry data will be sent through the translators for the information.)

USSR (Roger.)

MCC-M (We can see - we can see your picture. It's ver - it's very clear. Very good.)

USSR (Roger.)

SFE (Today I have to tell you about some scientific experiments which are being conducted onboard spacecraft Soyuz. There is an experiment called the Microbial Exchange. I consider that - on the board - I consider - There is the interest in microbial exchange between the different members of the crew. That's why we conduct it. We have special ampoules where we can collect the microbes and later on we take them to the ground. And over there where - there ... The samples are taken from different areas of cosmonauts' skin. This is conducted as well aboard spacecraft Soyuz and Apollo. Another experiment is the Zone-Forming Fungi. The idea of this experiment is study of biological rhythms which forward biological growth. We - We can see white and black rings, when they grow ... We conduct the photographing of the - of the fungi with the photo camera. I can show you how it's done. Twice a day we are working this equipment. The idea of this experiment is exchange of ... Spacecraft Soyuz and Apollo has two samples of this equipment, but they disagree in following: they differentiate that they start growing in different time and because of this, when we exchange them, what happens is the change of cycles. The scientists are studying the growth of these fungi. Besides this we have experiment, but this experiment is being conducted by the commander of the spacecraft. It's done in the descent vehicle. What he is doing now is the correction of the navigation, but (garble) that I cannot show to you.)

MCC-M (Thank you very much. Was - The picture was excellent. Now to do a good job on form 03 and 020.)

SFE (Want to do it - won't be able to do it because we did not have time to prepare it.)

MCC-M (That's okay. Until the next orbit. Otherwise we wanted let you go completely.)

USSR (Until the next orbit then.)

MCC-M (Soyuz, this is Moscow.)

SFE (Moscow, this is Soyuz 2.) (Soyuz 2.)

ASTP (USSR) MISSION SR36/2
Time: 14:36 CDT, 31:16 GET
7/16/75

MCC-M (We have all your data on the ground about the state of the spacecraft systems, that you are feeling all right and everything is fine. We see - recommend that you now take a rest.)

USSR (We will be standing by, powered up, and if anything happens to - needs to be transmitted then go ahead, transmit it. Thank you, how was the picture?)

MCC-M (There's no - how is this? The picture - The TV picture was excellent. It is excellent. Exceptionally good. Thank you very much. We wish you a good night, we wish you to have a good rest. Tomorrow you have a very heavy working day. Thank you, take a rest.)

END OF TAPE

ASTP (USSR) MISSION SR37/1
Time: 15:07 CDT, 31:47 GET
7/16/75

KIO (This is the Soviet Mission Control Center. Moscow time is 23 hours 7 minutes. The Soyuz spacecraft is on the 22nd orbit around the Earth. On the 22nd orbit, the Soyuz will begin communications through the Academic [sic] Sergei Korolev and Cosmonaut Yuri Gagarin tracking ships, also tracking stations Eupatoria and Tbilisi. During the Tbilisi comm time, Kubasov did a TV take from onboard. Also, telemetric measurements that were received during the 22nd orbit indicate onboard system normal. 502.4 millimeters of pressure. Temperature in the descent vehicle, 19 degrees. Air pressure in the orbital module, 507.2 millimeters. Temperature in the orbital module - 20.4 degrees. The cosmonauts were given a GO for preparing for sleep. At the next orbits, communications with the cosmonauts will take place only upon their initiation. This is the Moscow Mission Control Center.)

KIO (This is the Soviet Mission Center Control. Moscow time is 23 hours 31 minutes. The Soyuz spacecraft is concluding the 22nd orbit around the Earth. The trajectory parameters for the spacecraft's orbit for the 23rd: maximum, 224.8 kilometers; minimum altitude, 222.4; period, 88.9 minutes; inclination of the orbit, 51.78 degrees. This is Moscow Mission Control Center.)

KIO This is the Soviet Mission Control Center. (In 5 minutes the Soviet's spacecraft will go into range of the Soviet tracking ship, Cosmonaut Yuri Gagarin.)

KIO (This is the Soviet Mission Control Center. Moscow time - zero hours, 10 minutes. This is July 17, 1975. The Soyuz spacecraft is on its 23rd orbit, the 7th orbit of the day. The Soyuz spacecraft has been in flight for 32 hours and 50 minutes. In accordance to - with the flight program, it has passed through the zone of coverage of the Soviet tracking ship, Cosmonaut Yuri Gagarin. On command that was given to the craft, the crew was given permission to initiate communications at its own discretion. In accordance to the flight program, at the present time the cosmonauts have personal time. The spacecraft is in an inertial hold mode oriented at the Sun. It is oriented towards the Sun with its solar panels and is performing 3-degree-per-second roll. The operation of all the equipment and units on board the spacecraft is powered by the central power system; also the various other power sources are switched in, as well as the reserve ones. They are being set by the power source which will be used at the final end of the flight. This power source uses semiconductor silicone elements which are unified into a solar panel and forms the wings. This system provides power for the entire system. It stabilizes and monitors all the electrical parameters of the spacecraft. The uneven rate of use of power is related to the various times of power requirements in light or darkness in availability to the Sun or not. Also is related to stability and the great wide variation in electrical power load. The solar panels are built in the form of two folding panels and an opening mechanism - also has antennas and telemetry equipment. The solar panel is aimed at the Sun and this - the attitude is maintained by ship maneuver. Regardless of the maneuvers of the spacecraft during flight, the ability of the spacecraft solar

ASTP (USSR) MISSION SR37/2
Time: 15:07 CDT, 31:47 GET
7/16/75

panels is retained. The voltage of current in various attitudes and during maneuvering remains within specified limits. Monitoring over the condition of operation of the system is performed from the cosmonauts' control panel onboard. On the ground, according to telemetry which describe the current - current load and the voltage of the current produced. The centralized power feed is considerably larger than the requirements for the program. The backup battery and the independent power source of the descent vehicle are onboard in a storage mode and are switched in by the consumers in accordance to the power requirements and voltage requirements of the onboard electrical systems. The voltage drop-down to a minimum permissible level at the moment of separation of the orbital module from the descent module is automatically regulated. This is Moscow Mission Control.)

END OF TAPE

ASTP (USSR) MISSION SR38/1
Time: 16:54 CDT, 33:34 GET
7/16/75

KIO (This is Moscow MCC. Moscow time is one o'clock in the morning. The Soviet spacecraft Soyuz which is now in its 33d hour and 40th minute of flight, is carrying out its 23d orbit. At the present time, the spacecraft is flying over the Indian - southern part of the Indian Ocean. In accordance with the flight program, the cosmonauts are eating dinner. The spacecraft is in an inertial stabilization mode. It is now oriented with the solar batteries toward the Sun and is carrying out a rotation in that direction with a speed of 3 degrees a second. The 3 times a day that the food stuffs that are packed in suits are heated up and they are eaten. The menu is repeated once every four days. The tubes with food stuffs are kept individually packed in special encasements and they are marked in Russian and in English, which stands for the day that they should be eaten and the crew member that is supposed to eat it. The encasements for the tubes are kept in special containers in the orbital module. In order for alimentation, the crew is provided with spoons and forks and knives. Each crew member has his own individual collection of utensils. The first dish and various drinks are packed in tubes. These are heated in the electrical heating device, and the food stuffs will be prepared after the automatic system shuts off the heating element. The end of - After heating the food, the crew begins its dinner. The food stuffs are taken out of the containers, placed on the table, opened up, and secured onto the table. The remaining food stuffs are replaced back into the containers and stowed. After dinner the tubes are closed, the foil coverings cover the remaining of the food stuffs. They are placed in special cans and also returned back to the containers. The knives, spoons and forks are wiped with a special napkin and replaced in the stow bag. The toilet procedures and preparation for the sleep period - The rest period - are carried out after the dinner time. The towelettes, towels and napkins are also stored prior to presleep period. There are special towels which are used for the crew's hygiene. They are made out of special materials. They are treated and they are packed in cellulose. There are also special towels which are treated, which are used for wiping the surface of the crew member's body, his hands, his skin - and they are also wetted down with a certain solution. As a part of the hygiene container - hygienic container - they're also - the crew members - also contain electric razor blades and a means of selecting out of the atmosphere the bristles and the whiskers, that these do not fly around within the module in which the crew members are present. The collection and storage of human wastes and of the hygienic napkins and towels are placed in hermetically sealed containers and the package is 3.4 liters. When these are filled, these are packages with waste and excess - used towels are stored in special containers. The amount of water which each crew member will use is 1.7 liters per a 24-hour period. The water supply is kept in the orbital module. Water that is stored has the volume of about 30 liters. There are individual means for receiving water by each crew member. This water is pumped out by introducing excess pressure from the spacecraft and pressurizing a container to force out the water, that each crew member

ASTP (USSR) MISSION SR38/2
Time: 16:54 CDT, 33:34 GET
7/16/75

can use it. At the present time the crew is finishing their dinner, will carry out its evening toilet activities and prepare for dinner. This is Moscow MCC.)

KIO (This is Moscow MCC. Moscow time is 1 hour and 52 minutes. The Soyuz spacecraft is now in its 34th hour and 32nd minute. At present time it is carrying out its 24th orbit. In the Soviet MCC, based on the trajectory calculations, the parameters of the orbit will be determined for the upcoming 25th orbit. The parameters of the orbit are as follows:

In 2 hours and 37 minutes the spacecraft will be in the equator; it will be minus 167.41 degrees longitude; 224 maximum, the apogee; the period of the Soyuz is 88.91 minutes; the angle is 51.78 degrees. Based on the status vector the Apollo received from the Houston MCC, in the Moscow MCC the state vector was calculated and the orbital Apollo parameters were given. They are as follows: the 25th orbit: during the beginning of the orbit, when the spacecraft was over the equator at 2 hours and 42 minutes and 41 seconds. The longitude of that time is minus 1.49. The maximum apogee is 228. Minimal is 166.95 kilometers. The period of rotation of the Apollo is 88.37. The angle is 51.79 degrees. In the 25th orbit the phase difference between the Apollo and the Soyuz spacecraft will be 2,887 kilometers. In the 24th orbit from 1 hour 34 minutes to 1 hour 41 minutes the Soyuz spacecraft found itself in AOS of the tracking vessel Cosmonaut Yuri Gagarin. The second whole day of work is finished. The results of the flight are as follows: the cosmonauts woke up at 9 o'clock in the morning, Moscow time, in the 13th orbit. After carrying out their morning toilet activities, and check of the onboard systems, the pilot Leonov reported that the crew's physical condition. Then they checked all the onboard systems. The next communication was carried out through Ussurisk and Petropavlovsk. The cosmonauts reported into the Moscow MCC the condition of the onboard systems, received the necessary data from Earth, and carried out experiments: microbiology experiment, that is a unilateral experiment, and the experiment for ASO1 which are funguses. During the last work day the crew spent a lot of time working and liquidating the problems in the television systems, and this fixed the television cameras, the color television cameras, which are set in the orbital module. After carrying out the next regular communication, through the Ussurisk, Petropavlovsk stations, information was set up to the spacecraft on arriving at a circular orbit, then the crew of the Soyuz got ready for the second maneuver which was setting up the assembly orbit. The report on carrying out the orientation maneuver was sent down through the Vanguard tracking station. The 18th orbit - -)

END OF TAPE

ASTP (USSR) MISSION SR39/1
Time: 17:57 CDT, 34:37 GET
7/16/75

KIO (- - for the second maneuver which was setting up the assembly orbit. A report on carrying out the orientation maneuver was sent down through the Vanguard tracking station. The eighteenth orbit the crew carried out a maneuver for a tangential turnaround. This was sent downlink through the appropriate ground stations, Djusalj, Tbilisi, Kolpashevo, Ulan-Ude, Ussurisk and Eupatoria were the stations which received this information. On the eighteenth orbit the crew again had the second - had another breakfast and took some pictures - movie pictures. They checked the inboard systems, told them - told the MCC about their globus system, gave the pressure for the descent vehicle, and during the second - twenty-second orbit the spacecrew gave a TV report and continued carrying its experiment SO1 and growth of microorganisms and their SO-1 experiment which was the fungi experiment. After doing this the crew went to sleep an hour and a half earlier than planned. After this the cosmonauts had their dinner, prepared their toilet activities and prepared for sleep. At the present time, in accordance with the flight program, the cosmonauts are asleep. Based on the telemetric data received from the spacecraft, onboard the ship the atmosphere has the following parameters: In the living modules there is a lower temperature - a lower pressure in comparison to normal. The air pressure in the descent vehicle based on telemetric data received from) the tracking ship Yuri Gagarin (follows: the pressure in the descent is 520, temperature is 19 degrees Celsius. The pressure of the air in the orbital module is 505 and the temperature 20 degrees Celsius. The gas pressure in the service module is 940 - 540. Based on the telemetric data, the crew's health is good. Moscow MCC out.)

KIO (This is Moscow MCC. Moscow time is 2 hours 53 minutes. The Soyuz spacecraft is accomplishing its 25th orbit along - - From the time of the beginning of the flight 35 hours and 34 minutes have elapsed. At the present time according to the program of the flight, the crew is sleeping. The Soyuz spacecraft is now - is in an inertial stabilization mode and facing the sun. The spacecraft is revolving vis-a-vis the sun. We are now transmitting the commentary from the Soviet MCC. The ASTP project provides a complex system of ground and space communication. The MCC contains internal and external lines of communication. Their reliability is provided by specialists working in all directions. The common link provides primary as well as secondary or backup switching operations and capabilities. There is telephone communications; there is digital information communication; telemetric information, as well as television. The launch pad, the different tracking stations, and the search and rescue operations are all connected with communication capabilities. There are lines between the Mission Control Center and Baikonur. They also provide land based telephone and telegraph communication and this all is tied into the spacecraft with an uplink/downlink system. There is also instantaneous communication with all tracking stations, telemetric trajectory command, television program and telephone communication links are all provided. Communication between MCC and the farthest points of tracking stations as well as ships at sea which contain measuring and telemetric devices are all hooked up to a satellite systems to provide for good communication. The MCC has a two-way communication using telephone telegraph systems which tie it to the

ASTP (USSR) MISSION SR39/2
Time: 17:57 CDT, 34:37 GET
7/16/75

cosmonaut separation center, launch pads and other points. Also it's tied into the Houston MCC along thirteen telephone, three telegraph and two television channels. The MCC is also connected to the different telecommunication systems within the country and in this way they can keep in touch with the crew in the spacecraft and with all the tracking systems on the face of the Earth. As well, they can conduct the rescue operations at the end of the flight during the landing phase. Basically, in the area of descent, there are search and rescue services which communicate by radio/telephone and telephone/telegraph lines. In terms of their capabilities the communication systems can simultaneously provide communication for a system of television channels and several hundred telephone channels. There are international channels of communication which have equipment set up which provide telephone communication, reception of television transmission and high speed flows of telemetric information which comes down from the launch pad and from the ground tracking stations, information which comes down to the communication point of the MCC along telegraph and television and telephone lines as receiving equipment which is tied to a computer. Distribution of information to various users is carried along from a special switching operation. There is a control center at MCC which carries on all these phases of communication in various and many directions. The automatic telephone station voicing capabilities through speaker boxes and other capabilities are always maintained. There is a special speaking device on the panel which provides for communication for the crew by means of a special harness through which they can speak. There is also - there are also internal loops which can be used for special communication. Television transmissions and air-to-ground communications are carried out and are taped on tape recorders. This is the Moscow MCC speaking.)

END OF TAPE

ASTP (USSR) MISSION SR40/1
Time: 19:47 CDT, 36:27 GET
7/16/75

KIO (This is Moscow MCC. Moscow time is 3 hours and 47 minutes. The Soyuz spacecraft is now in its 36th hour and 28th minute of flight. The communication on the 25th orbit has been finished. The distance at 3 hours - the distance of the spacecraft at 3 o'clock in the morning the 16th of July is 5600 miles - kilometers. The forecasted parameters for the Soyuz-Apollo at the 26th orbit for the Soyuz will have the orbit with the following parameters: Time of hitting the equator is 4 hours 26 minutes. Longitude at the equator is 168 degrees 95 seconds. 224.49 is apogee; 221.89 is the perigee. The period of revolution for the Soyuz along the orbit is 80.9 minutes. The angle of inclination to the - is -) The angle of inclination to the equatorial plane is 51.38 degrees. (The distance between the spacecraft and Apollo at the 26th orbit is 2638 kilometers. At the present time, the cosmonauts are asleep, and their sleep will last until the end of the 29th orbit. This is Moscow MCC. Out.)

END OF TAPE

ASTP (USSR) MISSION SR41/1
Time: 21:00 CDT, 37:40 GET
7/16/75

KIO This is Soviet Mission Control Center. Moscow time is 5 o'clock. The Soyuz spacecraft has been in flight for 37 hours and 40 minutes. Right now it is in flight over the Atlantic Ocean. 3 minutes ago, it left the coverage zone of the American tracking station Ascension Island. The Mission Control Center computed the projected parameters of the Soyuz for the 26th orbit and of the American spacecraft, Apollo. According to the results of the prognosis, the distance between the spacecraft on the 26th orbit was 2332 kilometers. The Soyuz spacecraft is flying in an inertial stabilization mode and solar orientation mode. Angular velocity of the spacecraft rotation relative to the direction towards the Sun is 3 degrees per second. Mission Control Center, Moscow.

KIO This is Moscow MCC. (English)

KIO (This is Moscow MCC. Moscow time is 6 hours and 40 minutes. The Soyuz spacecraft is carrying out its 27th orbit based on the results received from the trajectory measurements on the last orbit. In the MCC in Moscow, it has been determined the forecasted parameters for the next orbit were forecasted. On the 27th orbit the Soyuz spacecraft will have the following parameters: the time of going up to the equator will be 7 hours 4 minutes 15 seconds. The longitude will be 123 degrees 7 minutes. 224 apogee, minimal perigee 221.68 kilometers. The period along the orbit will be 88.9 minutes. The angle of inclination to the equator (will be 51.70 degrees. Based upon the parameters, the distance between the Soyuz spacecraft and Apollo in the 27th orbit will be 2067 kilometers. Based on the assessment of the distance between the spacecraft for six o'clock in the morning will be 2630 kilometers. At the present time the Soyuz spacecraft is in orbital stabilization mode with a mode for solar spin.) solar orientation mode (The angle of speed) angular velocity (is 3 degrees per second. The spacecraft is now flying over the water body of the Indian Ocean. It - about 7 minutes ago since it came out of the shadow. This is Moscow MCC. Over.)

END OF TAPE

ASTP (USSR) MISSION SR42/1
Time: 00:03 CDT, 40:43 GET
7/17/75

KIO (This is the Soviet Mission Control Center. Moscow time is 8 o'clock. Soyuz 19 has been in space 40 hours and 40 minutes. It is in its 28th orbit around the Earth. The spacecraft has just passed over South America and now is over the Atlantic Ocean. In the 28th orbit, there was a comm session through the tracking ship Academician Korolev. This comm session has been completed successfully. The distance between Apollo and Soyuz at 7 o'clock was 2100 kilometers. On the data provided, the following parameters were provided for this next orbit. The parameters for the 29th orbit will be - It will pass the equator at 8:33; equatorial longitude at the time 101.07 degrees. (The maximum height is 224.6; minimum, 221.57. Time of orbit is 88.9 minutes. The inclination is 51.78 degrees. The) phase (distance between the Apollo and Soyuz in the 29th orbit is about 2803 kilometers. The spacecraft now is in inertial orientation. This was Soviet Mission Control Center.)

KIO (This is the Soviet Mission Control. Moscow time is 8:36. Soyuz is in flight 41 hours 16 minutes. It's in its 46th) 29th (orbit right now. It will gain AOS through Ussurisk and Petropavlovsk-Kamchatsky. 8:42 through 8:49; AOS through Ussurisk; Petropavlovsk from 8:47 to 8:55 Moscow time. During this AOS, there will be telemetry data regarding onboard systems and check on the orbit parameters. Data will be taken in the command service assembly. This assembly will check commands that change the orbit, check the communications with Mission Control, and retranslation of this information to Mission Control. In addition, at a number of these tracking stations, a check will be made on TV transmissions and translations from the tracking stations to the Mission Control. Likewise, a check will be made on the communication lines which give ballistic data. Likewise, a check will be made on temperature of the mission and assembly module. Likewise, on all the other assembly units which control communication, power. And this will be repeated at a number of tracking stations. These tracking stations should point equal distance) should be - are located at a great distance from one another (to ensure regular scheduled communications with the spacecraft to provide dependable communication with Moscow Mission Control. In addition to the ground stations, the tracking ships Academician Korolev and Yuri Gagarin also provide the same information. Likewise, the communication from the ships Korolev and Gagarin are aided by the unmanned sputnik Molnia-Lightning. This is Mission Control, Moscow.)

END OF TAPE

ASTP (USSR) MISSION SR43/1
Time: 00:41 CDT, 41:31 GET
7/17/75

KIO (Soviet Mission Control, Moscow. In 1 minute, Soyuz will attain AOS with the Soviet tracking stations Ussurisk and Petropavlovsk-Kamchatsky.)

KIO (Soviet Mission Control. Moscow time) 09:35. (It has just left longitude) the American tracking station Santiago. (This was Soviet Mission Control Center.)

KIO (That's the Moscow Control speaking. Moscow time is 09:55. Soyuz is completing the 29th orbit of its flight. The spacecraft has been in flight 42 hours 35 minutes. Parameters ... The crew is awakened and begun their morning tasks. They are monitoring onboard systems. The comm session will be at 10:14 over Ulan-Ude. The cosmonauts will report to the Control Center about their feelings and about the status of the tasks they are to complete. This is Moscow Control Center.)

END OF TAPE

ASTP (USSR) MISSION SR44/1
Time: 02:06 CDT, 42:46 GET
7/16/75

KIO Yesterday after the carrying out of the second maneuver on the 17th orbit, the Soyuz spacecraft 19 entered an assembly orbit with the parameters: maximum distance from the surface of the Earth, 225.4 kilometers; minimum distance from the surface of the Earth, 222.7 kilometers; orbital period, 88.9 minutes; orbital inclination is 51.8 degrees. Results of trajectory measurements indicated that ballistic data calculation for execution of maneuvers and the actual performance of the maneuvers were carried out with the highest accuracy. The maximum deviation of the assembly orbit from the agreed upon in the joint ASTP documentation, was 250 meters. For the allowable value - 1500 meters. The time deviation for spacecraft entrance into the exact given orbit was 7-1/2 seconds, according to calculations. Allowable deviation value is 90 seconds. After the completion of basic operations, providing the necessary conditions for docking with the Apollo, the crew of Soyuz 19 began to repair the onboard television systems. Recommendations of the specialists in the Mission Control Center developed by working on the ground with a mockup of the spacecraft, the great precision of the activities of cosmonauts Alexey Leonov and Valeriy Kubasov in performing the recommendations, determined the success of repair work in the complicated conditions of space flight. At 19:33 Moscow time, the first television report was conducted from onboard Soyuz 19. The TV report was transmitted for Central Television Network. The quality of color video was good. Incidentally, most of you left just at the time that the transmission began and those who stayed here with their beers and Coca Cola had a chance to see it all. (Pepsi Cola, terribly sorry. (English)) From 19:40 until 20:20, the cosmonauts had dinner. Immediately after dinner, the operations to lower pressure in the spacecraft modules were performed. As a result, the Soyuz 19 descent vehicle and orbital module dropped to 500 mmHg. On the 21st orbit, there was a direct communication of the Soyuz crew Leonov and Kubasov with the crew of the orbital station Salyut 4, Pyotr Klimuk and Vitaly Sevastyanov, during which the cosmonauts wished each other a good flight. At the beginning of the TV report, one of the first questions asked of Leonov was how are things on Salyut 4? Early in the 22nd orbit, there was a second TV transmission from onboard Soyuz 19 and the flight engineer commented on the scientific experiments included in the joint flight plan. After the end of the TV transmission, the crew continued to conduct biological experiments, "Growth of Microorganisms" and "Zone-Forming Fungi." The spacecraft commander noted in the onboard journal the data on the changes in growth boundaries of the microorganisms, and the flight engineer took still and movie pictures of the trays holding the fungus in order to register the fungal growth rate. From 22 hours 12 minutes to 22 hours 46 minutes, the final communication session of the working day was conducted, during

ASTP (USSR) MISSION SR44/2
Time: 02:06 CDT, 42:46 GET
7/16/75

which the cosmonauts were given the go ahead for sleep at 7 o'clock on the 17th of July, the distance between the Soyuz 19 and Apollo spacecraft was 9150 km. Right now, I present to you a shift leader of the flight, Comrade Sergei Pavlovich Tsybin.

MCC-M This morning you will be informed by Sergei Tsybin who heads one of the shifts at the Mission Control Center. (English)

KIO Can everyone hear? Yesterday was a rather difficult day for the crew of the Soyuz 19 because they not only carried out their program, but they also had to complete repairing the television defect. After they got up in the morning, somewhere near around 10 o'clock, they checked all the instrument panels in the ship and then started preparing for the second maneuvering operation. As you know, after the second maneuver, the ship entered the docking orbit on which it will remain today when it is to meet with the Apollo. During this maneuver, one of the engines was turned on for 21 seconds which added 11.6 kilometers speed to the ship. It was on for 21 seconds - the engine. Meters, meters per second, 11.6 meters per second. The maneuver was highly accurate and now we expect that in minimal time the Apollo will dock up with the Soyuz. So most likely all the reserve fuel which the Apollo is carrying will most likely not be used fully and a large part of it will remain. After the second maneuver, the crew started checking up on the orientation instrument panels and maneuvers in order to make certain that the ship remains on the orbit for the docking. After all this was completed, the Soviet Control Center transmitted to the crew recommendations on how to repair the television defect. All these instructions were drawn up carefully on the ground after a careful analysis of all the defects. After the defect was identified, the necessary repair work was copied on the ground - on the module, under the strict control of the specialists, and only after this were - -

END OF TAPE

ASTP (USSR) PRESS CONFERENCE SR45/1

Time: 02:14 CDT, 42:50 GET

7/17/75

MCC-M (- - and only after this were strict instructions drawn up on what the crew should do in order to repair the defect. At 19:35 when the ship entered its 20th orbit the crew reported down to Earth that everything that was necessary was done. Immediately after that, the first television image appeared from the ship and the program was carried on by Leonov. Approximately at 10:40) 22:40 (Moscow time Kubasov carried out the second television program from the ship, also speaking about the work that they were doing up in the ship. We are highly satisfied with both of the programs that we saw. This concerns the way the program was carried on by Leonov and Kubasov and also the quality of the image. At the end of the day, the crew again carried out certain experiments with fungi growth and only after that we allowed them to go to bed, because they had a very difficult day and I think that they deserved a longer rest period. We are highly satisfied with yesterday's day and we assess it as highly successful. Now a few words about the Apollo. We are very happy that the Apollo crew was able to repair the defect with help of Mission Control in Houston. You know that they had trouble with the passage from the command module to the docking module. We, you understand this, are particularly happy because if they were not able to repair the defect, they, of course, there would be no docking. Then there would be no - I'm sorry, there would be no transfer of the crew. But now all that is in the past and both ships are fully prepared for the docking, and we are expecting that this evening. Thank you that's all I wanted to say. Are there any questions?)

QUERY From the Associate Press. What specifically was the problem (garble) (English)

MCC-M (After a careful analysis on the ground, it was learned that the defect was in the connecting block. After, again, a serious analysis on the ground, specialists decided to isolate one part of that block. It seemed that there was an excess part of the block - reserve - we call it a reserve part. And the crew carried out the necessary changes in the connections in order to repair the defect.)

QUERY (The French press agency would like to know how communications are carried out between the Soyuz and the Salyut stations; through the Soviet Control Center or between the ships themselves?)

MCC-M (This is done through the Control Center - tracking stations - through the tracking stations, not between the ships themselves.)

MCC-M ((Garble) of the Federal Republic.)

QUERY (If everything goes according to schedule, when approximately will the luncheon or dinner take place in the Soyuz craft?)

MCC-M (According to the program, this will take place between 23:20 and 23:57 Moscow time.)

MCC-M (The Warsaw Radio. What according to the Soviet Control Center are the particular items of interest in today's program besides the docking?)

QUERY No, that was a very unprecise translation. (English)

MCC-M What was the precise question? (English)

ASTP (USSR) PRESS CONFERENCE SR45/2

Time: 02:14 CDT, 42:50 GET

7/17/75

QUERY (Garble)

MCC-M (First of all, this is the first time in history that there is coordinated action between two mission controls of two different countries. And in carrying out such complicated maneuver as the docking, this coordinated action - interaction between the two Mission Controls will be very tense and very important, - significant. I think that the most responsible and most important decision that the two of Control Centers will have to take will be the final decision on the docking.)

QUERY (Can we consider that today is the most important day in the entire flight. And, too, how many people are working on this entire flight in the two countries?)

MCC-M (Including all the journalists, it is very difficult to say.)

QUERY (Garble)

MCC-M (Not including journalists? I didn't count them; I can't give you a correct answer.)

MCC-M Here is the question from the representative of ABC Corporation - first part of the question is the most important day -

QUERY (We know from the press kits that were distributed and also from other information that the tracking stations in the Soviet Union employ approximately 2000 and that prior to the flight more than 5000 people were employed. Can you tell us approximately, not exactly, but approximately how many?)

MCC-M (I never really studied this question seriously. My speciality is the flight itself, but I can say that it's - -)

END OF TAPE

ASTP (USSR) PRESS CONFERENCE SR46/1

Time: 02:25 CDT, 43:05 GET

7/17/75

MCC-M Well, I never really studied this question seriously. My speciality is the flight itself, but I can say that it's a few thousand. Now the first part of your question. Yes, certainly today is the most important day of the flight, because the successful operation plan for today will, of course, influence the rest of the flight. All the other joint operations planned by the program will be successful only if the docking is successful.)

QUERY (What unexpected situations did you have during the flight, so far?)

MCC-M (All these questions were discussed in detail, and attention was focused on these in the preliminary meetings between the Soviet and American specialists. In case of any defects or trouble, there are approximately 10 special programs of action, which according to our specialists and American specialists, we believe, they cover all the defects that we could foresee - possible defects.)

QUERY (Japanese Radio: During the docking, where will the Salyut experimental station be?)

MCC-M (The orbits of the two stations are on different planes, therefore the maximum distance between them could be the diameter of the Earth.)

QUERY (According to the schedule, the docking should take place about 19:15 Moscow time. That's somewhere over central Europe. Does that mean that the tracking stations will be the Madrid station and the Soviet station?)

MCC-M (The point is that the whole process of docking is not very rapid, therefore it will begin somewhere over Madrid. The ships will touch, and the entire docking process will be completed over the Eupatoria station in the Crimea.)

QUERY BBC London. Can you tell us what is the status of the backup Soyuz, which was to be flown by Rukavishnikov and Filipchenko at Baykonur. Is another mission planned for this particular rocket and, if so, when is it and what is it? (English)

MCC-M (So far, in the agreement with the American group, the backup crew is in constant readiness until the flight mission is over. As for its further program, that will be decided by the Gagarin Space Center.)

QUERY Who will operate during the docking at the Moscow Center?

MCC-M Korovetz. What do you mean by Moscow Center? You mean who will communicate with the crew?

MCC-M Yes, yes. At the Mission Control Center.