Лист № 3. Сеанс 1 (19 мая 1969 года, 21:45): Хьюстон, говорит Аполлон-10, наконец-то у нас чудесный вид Луны. Сейчас мы видим... часть поверхности Луны...

https://history.nasa.gov/afj/ap10fj/as10-day2-pt8.html

026:06:31 Stafford: Yes. And I've got the Moon right up above the X-axis, now. It's a beautiful sight.
026:06:35 Duke: Roger. We envy you.
026:07:16 Duke: Hello, Charlie Brown. Houston. We'd like you to discontinue battery B charge now.
026:07:24 Cernan: Roger, Charlie, Thank you.
[Comm break].
026:12:47 Cernan: Hello, Houston. Charlie Brown. On that trunnion for the S-IVB, was that 32.1 or 3.21?

Лист № 3: Хьюстон, я — Чарли Браун. Как там относительно 32.1 или 3.21?

026:12:59 Duke: It was 32.1, 10.
026:13:03 Cernan: Okay.
026:13:45 Stafford: Okay, Houston. The star check went good, and I've moved to the center seat. John's moved to the left seat.
026:13:53 Duke: Roger.
026:13:54 Cernan: [Garble] was just about a half of a degree off.

Лист № 3: Корабль (SATELLITE) отклонился примерно на половину градуса.

026:13:58 Duke: Roger, 10. We copy.
026:20:57 Stafford: Coming up on 10 minutes.
026:20:59 Stafford: Mark.
026:21:00 Stafford: Ten minutes to the burn, and we're in attitude all squared away, Houston.
026:21:04 Duke: Roger.
026:21:25 Duke: Hello. Apollo 10, Houston, We'd like to get a time hack with you. We're counting down to the burn, and we show 11 minutes, 25 seconds.

Лист № 3: Время на отметке 11 мин. 25 сек.

026:21:32 Duke: Mark.
026:21:39 Stafford: Okay. Our event timer may have goofed up on us a little bit.
026:21:43 Duke: Roger. We showed you load the proper take time of 26:32:56.10.
026:21:53 Stafford: Yes. That's what we - we set our event timer at 47 minutes from event counting down.
026:22:05 Duke: Roger. I can give you a hack at 10 45.

Лист № 3: 10 мин. 45 сек.

026:22:10 Stafford: Okay, The event timer jumped 2 minutes on us some way.
026:22:14 Duke: Roger.
026:22:15 Stafford: We were all right on, the seconds.
026:22:21 Duke: Coming up on 10:30, Tom. I'll give you a Mark.
026:22:27 Duke: Mark.
026:22:28 Duke: 10:30.

Лист № 3: 10.30.

026:22:32 Cernan: Charlie, you give us another hack in 10 minutes so we can set our timer.
026:22:35 Duke: Roger.
026:22:50 Duke: Apollo 10, Houston. Passing 10:05. Stand by for a Mark at 10 minutes.
026:22:57 Duke: Mark.
026:22:58 Duke: Ten minutes.

Лист № 3: 10 мин.

026:23:02 Stafford: We're synched.
026:23:03 Duke: Roger.
[Comm break].
026:30:50 Cernan: Okay, Houston. Coming up on 2 minutes. Going to Normal on bank B.
026:30:54 Duke: Roger. Copy.
026:33:12 Stafford: Burn is complete.

Лист № 3: Включение двигателя закончено (THE BURN IS COMPLETED)...

Лист № 3 Сеанс 2 (19 мая, 22:30-23:50): Понял, Джо. Вращение вдоль продольной оси 307... 090... 000.... Это ставит Луну в отношение 1 к 5 и Землю 1 к 1 (Далее неразборчиво. Речь идет об использовании антенны с большим коэффициентом усиления).

https://history.nasa.gov/afj/ap10fj/as10-day2-pt8.html

026:42:36 Duke: Roger, John. Roll 307, pitch 090, yaw 000 [PTC spacecraft attitude angles]. That places the Moon in window 5 and the Earth in window 1. High Gain Antenna: pitch 005, yaw 265.
026:43:05 Young: Thanks much, Charlie.
026:43:07 Duke: Roger.
026:43:53 Young: Houston, we get this hydrogen pressure light on hydrogen tank 1, which we heard we might get, and wonder if we hadn't ought to - It went back out - if we shouldn't maybe cycle the fans. I guess they just cut in the heater itself Automatically.
026:44:13 Duke: Stand by.
026:44:15 Young: Looks like the heaters just came on automatically and are kicking it back up themselves.
026:44:19 Duke: Roger. Stand by.
026:44:53 Duke: Apollo 10, Houston. We'd like to hold off cycling the fans and wait until our next scheduled time and see what happens.
026:45:05 Young: Okay, Charlie. The light just went back out. I theorize that the heater may have come on and kicked it back within limits.
026:45:11 Duke: Roger. We concur.
026:45:12 Unidentified Crew member: And the caution and warning lights [garble].
026:45:13 Duke: Roger. We concur.
[Comm break].
026:49:24 Stafford: Houston, Apollo 10. We're maneuvering into the new attitude now.
026:49:27 Duke: This is Houston. Roger. Out.
026:49:35 Stafford: And, Houston, Apollo 10. How soon will you have the results of the midcourse we made?

026:50:08 Duke: Apollo 10, this is Houston. Superficially, the burn looked pretty good, but it will take about an hour for us to reduce the high-speed data. Over. And to get tracking.

026:50:21 Unidentified Crew member: Roger. Thank you.

[Comm break].

026:53:28 Cernan: Charlie, that's going to be a good attitude. We got the Earth in the left window and the Moon in the right, but I don't think we'll ever see the Moon on TV. It's just too thin and too dim.

026:53:39 Duke: This is Houston. Roger. Out.

026:53:47 Stafford: It looks like you've got a great attitude for the Earth. I've got it out my left window. It looks like the Gulf Coast is clear.

026:53:54 McCandless: Roger, 10. The network down here is ready for the TV whenever you are. I have an update to your PTC attitude mode, though.

026:54:06 Stafford: Stand by.

026:55:12 Stafford: Okay, Bruce. Go ahead with that new attitude.

026:55:18 McCandless: Stand by one, Tom.

026:55:33 McCandless: Roger, Apollo 10. Last night in your PTC mode, apparently you were bouncing off the edge of the yaw deadband, causing more thruster firing than we'd anticipated. So, we've come up with a revised procedure which, we hope, will get the spacecraft settled down more smoothly into the PTC mode. Basically, it follows the procedure on page Golf 1-94 of your checklist, except that you select 0.5-degree deadband. And then I have some thruster configurations for you. Are you ready to copy?

Лист № 4: Понял вас, Аполлон-10. Прошлой ночью в режиме «PTC» (пассивного терморегулирования) у вас очевидно были... они ожидались, поэтому мы говорили сегодня об изменении этого процесса, который мы также...

Космический корабль (переходит) более гладко к режиму PTC.

Как правило, это следует за режимом... Голф 1/94...

Далее, видимо, ошибка расшифровки, но, скорее всего, переводчик просто перепутал пленки с записью переговоров, потому что часть Листа № 4, Лист № 5 и часть Листа № 6 относятся к более раннему фрагменту этого дня (т.е. расшифровка этого фрагмента должен относиться к сеансу № 1):

026:04:25 Duke: Hello, Apollo 10. Houston. Is the Sun bothering you in this attitude?

026:04:31 Stafford: Not yet. We're just about to finish the roll maneuver in about 20 more degrees, and I can't see that it is. I think you did a good job of blocking it out - the Sun with the LM.

Лист № 4: Мы заканчиваем поперечное ориентирование (ROLL) еще приблизительно через 20°. Я думаю, что проделана хорошая работа.

026:04:41 Duke: Roger.

026:04:42 Young: Looks like we're going to be able to see stars, because the LM is shielding us from the Sun.

026:04:46 Duke: Roger. Good.

026:06:06 Stafford: Hello, Houston. 10.

026:06:09 Duke: Go ahead, 10.

026:06:12 Stafford: Okay. I can see the stars real great out my side window. I've got Sirius out my, side window, but even out through the rendezvous window - I can look up there - and I've got Orion and Rigel, there.

Лист № 4: Алло, Хьюстон, я — 10. Я могу видеть звезды на моей стороне. На моей стороне Сириус. Наверху я вижу «OIM».

026:06:23 Duke: Roger. Boy, old Snoop really - when he's - the Sun's on the side. We really must block it all out.

026:06:31 Stafford: Yes. And I've got the Moon right up above the X-axis, now. It's a beautiful sight.

026:06:35 Duke: Roger. We envy you.

026:07:16 Duke: Hello, Charlie Brown. Houston. We'd like you to discontinue battery B charge now.

026:07:24 Cernan: Roger, Charlie, Thank you.

Comm break.

026:12:47 Cernan: Hello, Houston. Charlie Brown. On that trunnion for the S-IVB, was that 32.1 or 3.21?

Лист 5: Хьюстон, я — Чарли Браун. Повторите еще раз в отношении «S4B», что там было 32,1 или 3,21?

026:12:59 Duke: It was 32.1, 10.

026:13:03 Cernan: Okay.

026:13:45 Stafford: Okay, Houston. The star check went good, and I've moved to the center seat. John's moved to the left seat.

026:13:53 Duke: Roger.

026:13:54 Cernan: [Garble] was just about a half of a degree off.

026:13:58 Duke: Roger, 10. We copy.

[Comm break].

026:20:57 Stafford: Coming up on 10 minutes.

026:20:59 Stafford: Mark.

026:21:00 Stafford: Ten minutes to the burn, and we're in attitude all squared away, Houston.

026:21:04 Duke: Roger.

026:21:25 Duke: Hello. Apollo 10, Houston, We'd like to get a time hack with you. We're counting down to the burn, and we show 11 minutes, 25 seconds.

026:21:32 Duke: Mark.

026:21:39 Stafford: Okay. Our event timer may have goofed up on us a little bit.

026:21:43 Duke: Roger. We showed you load the proper take time of 26:32:56.10.

026:21:53 Stafford: Yes. That's what we - we set our event timer at 47 minutes from event counting down.

026:22:05 Duke: Roger. I can give you a hack at 10 45.

026:22:10 Stafford: Okay, The event timer jumped 2 minutes on us some way.

026:22:14 Duke: Roger.

026:22:15 Stafford: We were all right on, the seconds.

026:22:21 Duke: Coming up on 10:30, Tom. I'll give you a Mark.

026:22:27 Duke: Mark.

026:22:28 Duke: 10:30.

026:22:32 Cernan: Charlie, you give us another hack in 10 minutes so we can set our timer.

026:22:35 Duke: Roger.

026:22:50 Duke: Apollo 10, Houston. Passing 10:05. Stand by for a Mark at 10 minutes.

026:22:57 Duke: Mark.

026:22:58 Duke: Ten minutes.

026:23:02 Stafford: We're synched.

026:23:03 Duke: Roger.

[Comm break].

026:30:50 Cernan: Okay, Houston. Coming up on 2 minutes. Going to Normal on bank B.

026:30:54 Duke: Roger. Copy.

026:33:12 Stafford: Burn is complete.

026:33:13 Duke: Roger. Copy.

026:33:17 Stafford: And I'm going to proceed to [garble].

026:33:20 Duke: Roger, Tom. Burn looks good to us.

026:33:23 Stafford: Okay. There's plus X and minus nine-tenths. I'm going to ullage it back to two-tenths.

026:33:27 Duke: Roger.

026:33:43 Stafford: There's two-tenths.

026:33:46 Duke: Roger.

026:33:50 Stafford: Residuals: minus two-tenths, zero, and plus three-tenths.

026:33:52 Duke: Beautiful.

026:33:55 Stafford: Proceeding.

026:33:56 Duke: Roger.

026:34:19 Duke: 10, Houston. It looked really good to us. One question: could you guys feel the second bank coming in?

026:34:30 Young: I didn't feel it, as a matter of fact.

026:34:36 Duke: Roger.

026:34:38 Young: I was busy turning it on. I really didn't check the chamber pressure too well. It looked like it jumped a little.

026:34:43 Duke: Roger.

026:34:45 Young: About 4 psi. Our Delta-VC on that was minus 4.4.

026:34:54 Duke: Copy.

026:34:59 Cernan: Charlie, the fuel remaining is 99.4 [per cent]. Oxidizer is 98.0 [per cent], and the PUGS meter bounced around quite a bit and ended up at 400 [lbs] [182 kg] Decrease.

Лист 5: О'кей! Чарли, горючего осталось на 99,4, окислителя 98,0. Прибор метался довольно сильно в разные стороны и остановился, показав уменьшение на 400.

026:35:19 Duke: Roger. Copy, Gene

[Comm break].

026:38:30 Stafford: Hello, Houston. Apollo 10.

026:38:32 Duke: Go ahead, Apollo 10.

026:38:35 Stafford: Okay. Why don't we try to kill two birds with one stone? Let's go ahead to the PTC attitude, and also we can get High Gain to the Earth and get a picture of the Earth with the TV as it comes up.

Лист 5: Алло, Хьюстон, я — «Аполлон-10». Я понимаю, что мы стараемся убить двух зайцев. Давайте перейдем к ориентации «РТС» (система пассивной терморегуляции) и сможем одновременно развернуть узконаправленную антенну на Землю (get the high gain to Earth) и получить изображение Земли телевизионной камерой.

026:38:50 Duke: Roger. Will do. We'll have the set angles for you in just a minute.

026:38:52 Unidentified Crew member: Roger.

026:38:54 Duke: And, Apollo 10, Houston. We'd like to move the PAD updates down to about 27:45 so as not to interfere with the TV.

026:39:06 Unidentified Crew member: Okay.

026:40:54 Duke: Apollo 10, Houston.

026:40:58 Stafford: Go ahead.

026:40:59 Duke: Roger, 10. If you - When you go to the PTC, if you point it north, we can give you a set of angles that will give you the Earth through one window and the Moon through another.

026:41:12 Stafford: Okay.

026:42:12 Duke: Hello, Apollo 10. Houston. We have some PTC [Passive Thermal Control] angles for you, and then some High Gain angles; and also we'd like for you to reinitiate battery B charge. Over.

026:42:22 Stafford: Okay. Stand by.

026:42:33 Young: Go ahead with those angles.

026:42:36 Duke: Roger, John. Roll 307, pitch 090, yaw 000 [PTC spacecraft attitude angles]. That places the Moon in window 5 and the Earth in window 1. High Gain Antenna: pitch 005, yaw 265.

026:43:05 Young: Thanks much, Charlie.

026:43:07 Duke: Roger.

026:43:53 Young: Houston, we get this hydrogen pressure light on hydrogen tank 1, which we heard we might get, and wonder if we hadn't ought to - It went back out - if we shouldn't maybe cycle the fans. I guess they just cut in the heater itself Automatically.

Лист 5: Хьюстон, у нас загорелась сигнальная лампочка. Не оттого ли это, что обогреватели включились сами автоматически?

026:44:13 Duke: Stand by.

026:44:15 Young: Looks like the heaters just came on automatically and are kicking it back up themselves.

026:44:19 Duke: Roger. Stand by.

026:44:53 Duke: Apollo 10, Houston. We'd like to hold off cycling the fans and wait until our next scheduled time and see what happens.

026:45:05 Young: Okay, Charlie. The light just went back out. I theorize that the heater may have come on and kicked it back within limits.

026:45:11 Duke: Roger. We concur.

026:45:12 Unidentified Crew member: And the caution and warning lights [garble].

026:45:13 Duke: Roger. We concur.

[Comm break].

026:49:24 Stafford: Houston, Apollo 10. We're maneuvering into the new attitude now.

026:49:27 Duke: This is Houston. Roger. Out.

026:49:35 Stafford: And, Houston, Apollo 10. How soon will you have the results of the midcourse we made?

026:50:08 Duke: Apollo 10, this is Houston. Superficially, the burn looked pretty good, but it will take about an hour for us to reduce the high-speed data. Over. And to get tracking.

026:50:21 Unidentified Crew member: Roger. Thank you.

[Comm break].

026:53:28 Cernan: Charlie, that's going to be a good attitude. We got the Earth in the left window and the Moon in the right, but I don't think we'll ever see the Moon on TV. It's just too thin and too dim.

Лист № 6: Да. И новая ориентация корабля будет хорошей. В левом окне у нас Земля, в правом — Луна. Но Луну вы едва ли увидите по телевидению. Она слишком узкая и слабо освещенная.

026:53:39 Duke: This is Houston. Roger. Out.

026:53:47 Stafford: It looks like you've got a great attitude for the Earth. I've got it out my left window. It looks like the Gulf Coast is clear.

026:53:54 McCandless: Roger, 10. The network down here is ready for the TV whenever you are. I have an update to your PTC attitude mode, though.

026:54:06 Stafford: Stand by.

026:55:12 Stafford: Okay, Bruce. Go ahead with that new attitude.

026:55:18 McCandless: Stand by one, Tom.

Фрагмент закончен. С этого места все возвращается к норме.

026:56:16 Young: Roger. Go ahead.

026:56:18 McCandless: Roger. After you get through the Enter at the end of flashing [Verb] 50 [Noun] 18 in the checklist, we'd like you to disable all jets on quads Charlie and Delta using the Auto RCS Select switches. Wait 20 minutes; then switch Manual Attitude Pitch and Yaw Acceleration Command mode, and enable all jets using the Auto RCS switches. Initiate your desired roll rate, which we show as three-tenths of a degree per second, and then, when roll rate is attained, go to Accel Command in roll. Increase the deadband to the desired value; Manual Attitude Pitch and Yaw Rate Command of 30 degrees deadband. Over.

026:57:40 Young: Okay. You said after you do the interim at 50 18, disable Charlie and Delta jets with Auto RCS switches. Then wait 20 minutes, go to Manual Attitude Pitch and Yaw Accel Command, and enable all the jets. Initiate your three-tenths of a degree per second roll rate, and then go Accel Command in roll and Manual Attitude Rate Command in pitch and yaw. Was that what you said there, Bruce?

Лист № 6: О'Кей! Вы сказали: «Прервите 5018, выключайте реактивные двигатели «С» и «Д» выключателями «авто RCS», выждите 20 мин., перейдите на ручное управление положением корабля, включите все реактивные двигатели (видимо, речь идет о двигателях ориентации — примечание переводчика) и три двигателя задействуйте для придания кораблю вращения вокруг продольной оси со скоростью 3°/сек., а затем перейдите на самоуправление (self-command), ориентирование вдоль продольной оси и на ручное управление положением...» Правильно ли я передал ваши слова, Брус? (Примечание переводчика: возможно имелось в виду: 3/10°).

026:58:20 McCandless: Roger. That's what I said.

026:58:28 Unidentified Crew member: [Garble.]

026:58:47 McCandless: 10, Houston. Say again.

026:58:54 Young: Could you - Why don't you explain what we're doing here?

026:59:00 McCandless: [Laughter.] Okay, We're trying to get you set up in a stable position and all damped out and then initiate, very carefully and slowly, PTC and then open up deadband. We hope this will cut down on the thruster firing and keep you from bouncing off the side of the Yaw Deadband with more thruster firings and consequent noise and vibrations than you had last night.

026:59:31 Young: I got you.

026:59:36 McCandless: And...

026:59:38 Young: ...But you [garble].

026:59:42 McCandless: Go ahead, 10.

026:59:47 Stafford: Okay. John's copying that down, and we've got the tube locked onto Earth.

026:59:52 Cernan: Okay. But really what we're trying to do here is just get the thing real stable before we start, and then we're going to a 30 degree deadband just like before. Right?

026:59:59 McCandless: That's right.

027:00:01 Cernan: Okay.

027:00:05 McCandless: And, down there on steps E and F: you can go into Manual Attitude Roll Accel Command in order to initiate your roll rate, if you like.

027:00:28 Cernan: Okay. You've got the TV coming at you, now.

027:00:31 McCandless: I don't show it on the color yet. Let me check it out on the black and white monitor.

027:00:41 McCandless: Okay. We're seeing the Earth on the black and white. It's filling up about one-third of the screen vertically. Looking good. Okay. You're on the color now and looking beautiful.

027:01:16 McCandless: Okay. We've got the North Pole over to the upper right-hand corner - the right-hand edge of our screen. Do you have a commentary from up there. 10.

027:01:25 Stafford: Yes. Okay. It looks like the North Pole and most of Russia is covered with clouds. The United States is pretty much wide open. In fact, the solar subpoint is right over the Gulf of Mexico now.

Лист № 6. Картина такова: северный полюс и большая часть России покрыты облаками. США довольно хорошо открыты. Этот субполярный регион (polar subpoint) расположен прямо над Мексиканским заливом в данный момент.

027:01:39 McCandless: Roger, 10. Could you give us narrow beam on the High Gain Antenna?

027:02:00 Stafford: Okay, Houston. I've got the full zoom on it, so you can see we're quite a bit further away today than we were yesterday.

027:02:07 McCandless: Yes, indeed.

027:02:08 Stafford: Roger. What you see there - What you see there is a little bigger than we actually see it, since I have the full zoom on it. If you look to the south, you can see all of South America there, and west of the Andes is clear.

027:02:23 McCandless: Roger.

027:02:28 Stafford: And in the tropical rain forest over Venezuela and Brazil and Columbia you can see the clouds that hang over there all the time. I noticed how clear it is west of the Andes.

Лист № 7: Глядя на юг, вы можете увидеть всю Южную Америку и к западу от Андов все чисто от облачности. Тропический ливень над Венесуэлой, Бразилией и Колумбией, там облачность и постоянный дождь, хотя к западу от Андов все чисто.

027:02:39 McCandless: Roger. We can see that on the left of our screen. The landmasses don't seem to stand out quite as clearly today as they did yesterday.

027:02:51 Stafford: That's correct. A lot of it is the cloud cover, and also you can see night-time moving over Europe now.

027:03:02 Stafford: You've got a real weird cloud formation coming around down - just a minute. Let me get it focused.

027:03:46 Young: It's a real peculiar-looking cloud swirl. It comes off of what looks like Labrador and goes all the way across the ocean into Europe.

027:04:04 Stafford: I'm having a little harder time holding it today because of the narrow beam that we have with the zoom lens. We're out at maximum zoom now.

027:04:12 McCandless: Roger. It's coming very nicely here. Would you confirm you are in the Exterior on ALC?

027:04:20 Stafford: Right. We're Exterior on ALC.

027:04:23 McCandless: Thank you.

027:04:24 Stafford: I'll open it up to about a 55 millimeter and show you exactly how it appears to us.

027:04:28 McCandless: Roger. We're...

027:04:29 Stafford: Sure are a lot of clouds down there today.

027:04:32 McCandless: We are standing by for your zoom - out to show us the relative size as it appears to you.

027:04:38 Stafford: Okay. Right. Right there is about how the Earth appears to us now. We've made a few miles since yesterday.

027:04:55 McCandless: Yes, indeed. Roger. We show you about 115,000 nautical miles [213,000 km] out, here in our plots. Looks like about halfway.

027:05:10 Stafford: Yes. How are the colors coming into today, Bruce?

Лист № 7: Брус, как у вас цветное изображение?

027:05:12 McCandless: Oh, the colors are coming beautifully. I'm amazed at the fidelity. The sea seems to reproduce the same color from day to day, so it looks like you guys have a pretty stable piece of equipment.

027:05:25 Stafford: Okay. Again, you can see Baja California coming in there just real clear, and the Rocky Mountains, particularly starting into Mexico going up through Colorado and Wyoming, are coming in.

027:05:36 McCandless: Roger. I'm having a little difficulty picking out the landmasses down here today.

027:05:44 Stafford: That's because of cloud cover. It looks like broken clouds over the southeastern part of the United States. Northeast has a little bit more. Looks like Canada is all socked over today, and over that big cap that goes up over the North Pole and over to Russia it's just solid overcast.

Лист № 7: Вы можете снова очень ясно видеть Калифорнию, Скалистые горы от Мексико до Колорадо, Вайоминг. Над всей юго-восточной частью Америки переменная облачность, над северо-восточной плотнее, похоже, что Канада вся затянута облаками, а над чашкой северного полярного круга и далее над Россией все покрыто сплошной облачностью.

027:06:04 McCandless: Roger. We can pick up part of South America. Must be the Andes, just above or just to the west of the terminator down in the southern portion of the globe.

027:06:14 Cernan: Bruce, you should see all of North and South America from where you are. We're going to zoom it in again here. Show you a little bit closer.

027:06:39 Cernan: That's maximum zoom right now on the camera.

027:06:45 McCandless: Roger.

027:07:04 Cernan: You know, it's a beautiful sight. We're sitting here, and it's almost like science-fiction looking back at it, Bruce.

027:07:12 McCandless: Right. We can pick out the continents a little more clearly.

027:07:39 Young: I'm voting for the world being round, if there's any dissenters.

Лист № 7: Голосую за то, что Земля круглая.

027:07:40 McCandless: Roger. We'll record your vote on that issue.

027:07:45 Young: And, you know, yesterday we said the San Joaquin Valley was very evident. It sits on a bowl. Even though we're looking at it obliquely, you can still pick it out in the western United States. It's just like a big bowl carved out of the coastal end the Sierra Nevada Mountains.

Лист № 7: Вы знаете, вчера мы сообщали, что долину Сент Уокин было очень отчетливо видно. Она как будто сидит на шаре, даже глядя на нее под острым углом, она все равно выделяется в западной части США в виде большого шара, высеченных на прибрежных (coastal) гор и гор Сьерра Невада.

027:08:04 McCandless: Roger.

027:08:27 McCandless: Apollo 10, Houston. The SPS data has been looked at on both the midcourse 2 and the evasive maneuver, and all the data is good. We'd like to get you to cycle the ALC switch once, so we can observe the effect on the picture down here.

027:08:47 Stafford: Okay. Let me go back and get our monitor. Okay. Here we are.

027:08:50 McCandless: Roger. You just hold it steady, and then cycle it a few seconds to Interior and back to Exterior for us.

027:09:03 Cernan: There's Interior now.

027:09:06 McCandless: Boy, we can really see it working out down here.

027:09:09 Cernan: Coming back to us again.

027:09:10 McCandless: Beautiful.

027:09:18 Cernan: And, Tom's cutting down the f-stop now a little bit.

027:09:24 McCandless: Beautiful. What f-stop are you using? If you can stop it down one or two stops more it seems like the definition is better.

027:09:37 Cernan: There's f:22 right there.

027:09:39 McCandless: Okay. Hold it there.

027:09:51 McCandless: 10, this is Houston. When you stop it down, we get a second or so of excellent definition and no saturation, and then it tends to saturate again up in the North Polar region as though the ALC weren't quite picking up the intensity of the highlights.

027:10:29 Cernan: Bruce, we will not be able to see the Moon because - through the TV - because we got the Sun right along side of it out the right-hand window.

Лист № 8: Брус, Луну по телевидению мы увидеть не сможем, потому что солнце находится в непосредственной близости от нее в нашем правом окне.

027:10:35 McCandless: Roger. Understand.

027:10:44 Cernan: We'll bring you on inside the spacecraft, if you like.

027:10:48 McCandless: Okay. Before you do that would you open the lens up about two stops slowly and then stop it down fairly rapidly for us?

027:11:02 Cernan: Okay. They are coming open now. Up and back.

027:11:30 McCandless: Roger. Go ahead and bring the camera inside now if you like.

027:11:35 Stafford: Yes, I can see what you mean about the saturation. From this kind of a candid view down here looking down at this distance, you could never tell anybody inhabited the place.

027:11:46 McCandless: Roger.

027:11:50 Stafford: Okay. We're going to take you inside.

027:11:52 Cernan: That's probably been said before.

027:12:18 McCandless: Okay. We're picking up your transmission from inside now.

027:12:48 Cernan: Houston, this is obviously our patch. How is it coming through in color?

027:12:54 McCandless: Not so good really. It looks like you got some rather intense lighting from the back and the side - If you could get the lighting more directly on the patch, it would be better.

027:13:09 Cernan: Yes, that's the Sun coming in.

027:13:13 McCandless: Roger.

027:13:30 McCandless: We got John coming through nicely on the tube. What was the three fingers for?

027:13:55 Cernan: Do you see our emblem of today?

027:13:56 McCandless: Oh, that's beautiful.

027:14:06 Cernan: We were going to put some more things in, but we just ran out of time.

027:14:10 McCandless: [Laughter.] Roger! Is this also your emblem?

027:14:20 Cernan: This is another emblem. Do you see any resemblance between the card and the guy holding the card?

Лист № 8: Находите ли вы какое-либо сходство между карточкой и человеком, который держит эту карточку?

027:14:26 McCandless: Now that you mention it.
027:14:35 Cernan: Does he carry the briefcase?
027:14:38 Young: Roger. Good grief, Charlie Brown!
027:14:39 Cernan: Now you're going to bring on that whizzer here,
027:14:44 McCandless: Okay. We got Snoopy now.
027:14:56 Cernan: Boy, he's been quiet for 2 days; he's going to get a chance to do a little woofing here in the next couple days.
027:15:04 McCandless: Roger. We notice the resemblance there, too.
027:15:08 Cernan: Thanks a lot. I didn't know Tom had a big nose like that.
027:15:14 Stafford: Ugh.
027:15:34 Stafford: Take you over to Gene-o's side of the spacecraft.
027:15:40 McCandless: Roger. Picking up Gene now. You've got rather strong backlighting from the window.
027:16:13 McCandless: That's the spirit. You all drawing the window shades there?
027:16:18 Cernan: How's that? Any better?
027:16:20 McCandless: Yes, indeed.
027:16:24 Young: We didn't get a chance to shave this morning before this show. I hope that doesn't bother anybody.
027:16:29 McCandless: No, it doesn't bother us. The definition is real good; we can just about read your wristwatch there, Gene.
027:16:46 McCandless: Roger. Looks like it says about 16:00. 16:05?
027:16:52 Cernan: 16:05 Cape time. 16:05 Cape time.

Лист № 8: 1605 «Кейп тан» («Кейп тан» — фонетически).

027:16:56 McCandless: Roger. We copy.
027:17:05 Young: Get it.
027:17:06 McCandless: Roger we synchronized our watches here.
027:17:11 Young: Beautiful. Beautiful.
027:17:13 Stafford: Looks like we have a good piece of gear here.
027:17:16 McCandless: Yes, it does.
027:17:17 Young: I'll give you a whizzer, give you a whizzer of TP over here.
027:18:10 Cernan: One of our problems is trying to figure out which way is up and which way is down.
027:18:20 Stafford: And it's beautiful one time you have your choice. If you don't like things right-side-up, you can go upside-down.
027:18:22 McCandless: Roger, down here. Okay. We've got one of you in each direction.
027:18:30 Stafford: It's really a ball up here living in zero g, believe me.
027:18:34 Cernan: It's the only way to fly.
027:18:40 Stafford: Once you get going, the cost for individual passenger mile becomes rather reasonable.
027:18:51 McCandless: Roger. We Copy.
027:18:54 Cernan: I notice, boy, it sure picks up the Sun's reflection and density no matter where you go. That little reflection is coming out of my window behind me.
027:19:09 McCandless: Roger. What f-stop are you all using now?
027:19:10 Cernan: We're on about f:28, I believe, here. Wait a minute. Yes, about 22 to 28.

027:19:21 McCandless: Houston. Roger. Out.
027:19:24 Cernan: Still good color?

Лист № 8-9: Примерно 28, сейчас посмотрю. Да, 22-28. Как, цвета все еще хорошо?

027:19:25 McCandless: Yes, indeed.
027:19:27 Cernan: You might notice the dynamics here.
027:19:36 Young: I just do whatever he says.
027:19:41 McCandless: Say, Tom, the flight engineer wants you to be sure you log all your exercises.
027:19:48 Stafford: I got you.
027:19:54 Cernan: Like I said earlier, this isn't fanning the Peacock, but it's the best we've got.
027:20:12 McCandless: Boy, with dynamics like that, you guys ought to be pretty good at this PTC mode.
027:20:18 Young: I mean to tell you.
027:20:20 Stafford: Right. That's why we got about 10 hours sleep last night.
027:20:22 McCandless: Roger.
027:20:33 Cernan: That's perfect zero gravity there. boy, I'll tell you there's nothing like it.
027:21:02 McCandless: 10, this is Houston. Is there...
027:21:03 Stafford: ...perfect balance.
027:21:04 McCandless: Roger. Are there any sort of air currents there affecting anything you can feel?
027:21:12 Stafford: Roger. It's blowing a little movement. But it's not out here much really.
027:21:20 Cernan: That's an effect we discovered a long time ago. If you watch it long enough, it'll go up.
027:21:25 Young: It's really hard to stabilise something so it won't move.
027:21:30 McCandless: Roger. I remember that from Gemini 10.
027:21:35 Cernan: We discovered a Cernan effect up here, but can't find which way is up.

Лист № 9: Мы обнаружили, что Сернан... но не знаем, где верх, где низ.

027:21:39 McCandless: Yes, Gene. Could you move the camera around slightly? I've got a very bright spot coming in the window, I just want to make sure that you don't burn the target with the f:2 - f:28 f-stop.
027:21:52 Cernan: Yes. I'll try it here, Bruce, to got it away from some of that if I can.
027:21:55 McCandless: Roger.
027:22:07 McCandless: Oh, it's really looking good now, Beautiful color here.
027:22:14 Stafford: Now we got three objects going.
027:22:21 McCandless: This is a real testimonial to prove you were there, in case there were any doubters.
027:22:27 Cernan: If people want to know what kind of men go to the Moon, there's a good look at one right there. Could you believe it?
027:22:35 Stafford: Some people still don't.
027:22:52 McCandless: I'm surprised you all have not set this to music.
027:22:58 Cernan: Oh, you want music, Well, we'll give you some music at the conclusion here.

Лист № 9: Вы хотите музыку? Мы дадим вам музыку по окончании.

027:23:10 Stafford: Okay. We'll take you back outside now.
027:23:14 McCandless: Roger.

027:23:28 Cernan: While Tom shows you that, we've got another little rendition we'd like to put your way.

027:23:33 McCandless: Roger. We're standing by.

027:23:54 Cernan: Here it comes. This - This is just so that you guys don't get too excited about the TV and forget what your job is down there.

027:24:05 McCandless: We're ready for what we're about to receive.

027:24:07 Unidentified Crew member: [Music being played].

Лист № 9. (Передается музыкальная программа).

027:24:36 Cernan: We don't need it all.

027:25:16 Stafford: Just wanted to send some thoughts back to you.

027:25:18 McCandless: Roger. Thank you for your thoughts, and with this view of the Earth, it looks like the United States - The landmass of the U.S. is showing up better now than it was few minutes ago.

027:25:30 Stafford: Right, Bruce. I can really see them. Looks like the New England states are kind of clobbered in there.

027:25:36 McCandless: Right.

027:25:37 Stafford: But the main part of it's coming in real good. And again you can see the great American desert, the Rocky Mountains, and the Sierra Nevadas there.

Лист № 9: Хорошо, Брюс. Штаты Новой Англии выглядят слегка затуманенными, но основная часть передается хорошо. Снова можно видеть Великую американскую пустыню, Скалистые горы и Сьерра-Неваду.

027:25:50 McCandless: Oh, it's just beautiful on the - the transients before it saturates there.

027:25:57 Cernan: Okay. I'll try to give you another one.

027:26:24 McCandless: All those little glimpses are good, but you've got to be fast to catch them,

027:26:30 Stafford: Is it - I'm trying to hold it as steady as I can. Is it looking okay?

027:26:33 McCandless: Yes. You're doing a good job on holding it.

027:27:15 Stafford: Houston, Apollo l0. On the monitor, it appears that I have a couple of little bumps and ragged edges. Is that coming through on the Black and white?

027:27:21 McCandless: Yes, it is. It's coming through on the black and white; and, of course, in the color that we've got here, it looks like it's in the horizontal sweep.

027:27:35 Stafford: Yes. I noticed it when we first turned it on; it didn't have that, then it slowly started to saturate.

027:27:40 McCandless: All right. We saw those little bumps yesterday also.

027:27:45 Stafford: Well, I think it was at the end of the transmission yesterday.

027:27:48 McCandless: Right.

027:27:53 Stafford: Okay. We'll go ahead and terminate the TV pass here. I just wanted to play a little music for you so we have something up here when it gets lonely during the PTC mode.

Лист № 9: Хорошо, мы прекратим телевизионную передачу, а вы, ребята, дайте немного музыки, на период пассивного терморегулирования.

027:28:05 McCandless: Roger, Apollo 10. We enjoyed the TV and the music.

027:28:15 Cernan: We'll be talking to you tomorrow.

027:28:18 Young: Adios.

027:28:20 McCandless: Roger. I hope you will be talking to us before tomorrow.

027:28:24 Stafford: Oh, we plan to.
027:28:26 Young: About this PTC stuff, Bruce.
027:28:28 Cernan: About this in the Moon stuff. You better keep at it.
027:28:50 McCandless: Roger.
027:31:33 McCandless: Apollo l0. This is Houston.
027:31:36 McCandless: Mark.
027:31:37 McCandless: You're halfway. Over.
027:31:41 McCandless: Roger. Thank you.
027:31:46 McCandless: And, based on present trajectory analysis, it looks like no more midcourse corrections will be needed prior to LOI. Over.
027:31:53 Stafford: That sounds beautiful.
027:31:55 McCandless: You're right on the money...
027:31:57 Cernan: ...it's cheaper to keep going than turning back, right?
027:32:01 Stafford: I tell you it looks beautiful going away, and it is going to look even better coming back.

Лист 10: Хорошо улетать, но еще лучше будет прилететь обратно.

027:32:03 McCandless: Roger.
027:32:04 Stafford: What kind of - What kind of perigee you show us in these days there, Houston?
027:32:11 McCandless: About 60 miles pericynthion. And, did you all see the S-IVB from your burn attitude?
027:32:20 Young: No, we couldn't see it. We might have been off in roll. I didn't want to fool with that too much.
027:32:25 McCandless: Roger.
027:32:26 Cernan: But I didn't see it, but we were on the star, all right.
027:32:30 McCandless: Roger. We were just curious to know if you had seen it.
027:33:30 Stafford: Hello, Houston. Apollo 10.
027:33:31 McCandless: Go ahead, 10.
027:33:33 Stafford: Roger. Just want you to give our regards to Chris and all of the people in MCC and the tracking networks. It looks like all those computers are working right down to the last bit. To give us that 60 miles perigee is pretty fantastic.
027:33:45 McCandless: Roger, Tom. We'll pass that along.
027:34:00 Young: Probably better watch it for the next couple of days just to make sure, don't you reckon?
027:34:05 McCandless: Oh, I don't reckon that we'll desert the MOCR here. I think there are a few people planning on sticking around, at least until you get into orbit.
027:34:13 Young: Okay. That's really [garble] it right down to the old slot, though, man. That's great if it - if it does it.
027:34:38 Stafford: You can tell Phil Shaffer to keep smiling. I can probably see him from here.
027:34:46 McCandless: Say again. Who am I supposed to tell, Tom?
027:34:51 Stafford: Phil Shaffer.
027:34:52 McCandless: Roger.
027:35:14 McCandless: Apollo 10, this is Houston. Prior to midcourse correction 2, we set your X-PIPA Bias to zero and, as a result of this, you have to update your erasable memory table and the contingency book. I've got a one-line update for you.
027:35:36 Stafford: Okay. We are getting it out now.
027:35:47 Cernan: Go ahead, Bruce.
027:35:48 McCandless: Roger. The E-memory table, column A, line 3: All balls. Over.
027:36:15 Cernan: Okay. Got all balls, column A, line 3.

027:36:19 McCandless: Okay. And When you're ready to copy, I've got your P37 block data for TLI aborts, 35, 44, and 53 hours.

027:36:33 Cernan: Stand by half.

027:36:53 Cernan: Okay, Bruce. Go ahead.

027:36:57 McCandless: Roger.

027:37:37 McCandless: Roger 10. I am ready to go ahead.

027:37:42 Cernan: Go ahead. Fire.

027:37:43 McCandless: Okay. TLI plus 35 hours: 037:30, 5071, minus 165, 094:35. Over.

027:38:04 Cernan: Why don't you read them all, Bruce, then I'll get them back to you.

027:38:06 McCandless: Roger, TLI plus 44: 046:30, 6695, minus 165, 094:14. TLI plus 53: 055:30, 5499, minus 165, 118:33. Over.

027:38:48 Young: Okay. TLI plus 35 is 037:30, 5071, minus 165, 094:35. Plus 44 is 046:30, 6695, minus 165, 094:14; plus 53 is 055:30, 5499, minus 165, 118:33.

Лист № 10: Хорошо, я записал следующее: 35, 0730, 5071 минус 165, 09435, плюс 44, 046306695 минус 165, 09414 плюс 53, 055305499 минус 165, 11833.

027:39:17 McCandless: Roger, Readback correct. Out.

027:40:17 Young: Okay. Bruce, we've done your maneuver to the place where we disable all the jets, and we're going to wait here 20 minutes. Is that right?

027:40:26 McCandless: That's affirmative. Roger. All the jets in quads Charlie and Delta.

027:40:42 Young: Okay. You know we've got AC - the AC jets, Off, right now. You know that, don't you?

John Young's reference to AC is his shorthand for RCS quadrants A (Alpha) and C (Charlie).

027:40:49 McCandless: Stand by.

027:41:01 McCandless: Roger, 10. What we're attempting to do is get you down to a single thruster firing at a time for attitude [garble] corrections. Smallest couple we can get.

027:41:22 Young: Roger.

[Comm break].

027:45:00 Young: Hey, Bruce, the theory behind this PTC is that once initiated it never fires another jet. Isn't that the theory?

Лист 10: Скажите, Брус, пассивное терморегулирование устроено таким образом, что после его начала не включается больше ни одни двигатель? Так ли это по теории?

027:45:09 McCandless: I think that's the theory. Stand by, and I'll confirm it.

027:45:14 Young: I'm just - I'm just pulling your leg.

Лист 10: Я тебя разыгрываю!

027:45:21 McCandless: They say that's the theory, but I see a lot of fingers crossed.

027:45:27 Young: Yes, that's why I brought it up.

027:45:30 McCandless: Roger.

027:45:32 Young: Man, if it works, it will be the greatest thing since...

027:45:36 McCandless: You cut out after...

027:45:37 Young: Peanut butter.

027:45:41 Young: Yes, there was a delay in the transmission there. The speed of light. That peanut butter.

Лист № 10: Если это получится, то это будет величайшим достижением со времени изобретения арахисового масла. Я имею в виду задержку передачи, идущей со скоростью света.

027:45:41 McCandless: Roger, Copy. Greatest thing since peanut butter.

027:45:49 McCandless: Hello, Apollo 10. Houston. We'll have a ground handover at 28 hours even GET.

[Long comm break].

027:57:52 Cernan: Roger. Who are you handing us to, Charlie

027:57:56 Duke: say again. Oh, we're handing you over to Madrid.

027:58:05 Cernan: Okay. That's a nice place. Will you start speaking Spanish to us now, Charlie?

027:58:20 Duke: I don't believe I could do that. How about buenos dias? Is that enough?

027:58:26 Cernan: Ah, Si senor. Muy bien, gracias.

027:58:29 Duke: Buenos noches.

027:58:30 Young: ...English is good enough for me.

027:58:31 Duke: Roger.

027:58:32 Young: Buenos noches.

027:58:33 Duke: I got a hard enough time speaking English.

027:58:37 Young: That's all right, Charlie. You just keep talking grits. I understand it.

027:58:51 Cernan: Charlie, not to sound corny or trite, but it really is like another world out here.

Лист № 10: Чарли, мои слова могут показаться тебе старыми и избитыми, но здесь чувствуешь себя как в другом мире.