

ASTP (USA) MC148/2

Time: 18:31 CDT, 35:11 GET

7/16/75

DMP Yea, and that's not much of a rise.
CC-H Vance, Houston. We don't see any data on you down here now.
CMP Okay, just a second, I'll check my suit power switch.
CC-H Roger.
CMP Panel 10 appears to be hooked up okay, Bo. And I'm on the umbilical for the center couch.
CC-H Understand.
CMP Okay, check again, there was one thing not connected.
CC-H Roger, we're checking.
CC-H Vance, thanks. We're getting data now.
CMP Very good.
CC-H Apollo, Houston. We understand that the data is very clean. This is the data on Vance.
CMP Glad to hear the heart's still pumping there.
CC-H Apollo, Houston. Our data shows some problem with the furnace and we would like you to redo the helium injection that was performed earlier.
CMP Okay, Deke. We got that. You go ahead.
ACDR Okay, Deke said he did it twice which was what the plan calls for. Over.
CC-H Roger. Understand. Deke did it twice.
ACDR Yes. It's in the procedure.
CC-H Roger. I know he said he completed the procedure. Let me check with experiments once again.
ACDR All right.
CC-H Apollo, Houston. Experiments say they still would like it done again. They're having some problem here and they'd like that helium injection performed another time.
ACDR All right. That was - was that a total sequence of two shots or just one shot?
CC-H Checking.
ACDR Was that two injections or one injection?
CC-H We would like the two injections, Apollo.
ACDR Okay, it worked and Deke's going back there.
CC-H Roger.
CC-H And Apollo, Houston. Our wait period has been adequate and you can continue on page 1-15 of the experiment activation.
CMP Okay, we're starting now.
CC-H And Vance, the doctors are happy with the data they've seen from you and you can let the commander hook up to the OBS.
CMP Okay. That means that I can take my OBS off now or, or would you still like to see exercise?
CC-H Roger. You can take yours off and we've had enough data from you and it looks like you put the (garble) on just right and we got good data.
CMP Very good. Thank you.
CC-H Apollo, Houston. The X-ray looks good.

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CMP Okay, Bo we just completed an X-ray first cal and held
it for about 30 seconds. We'll close the door now.
CC-H Roger.
DMP Okay, Bo. I've injected helium two more times.
Want anything else done with it?
CC-H Roger, Deke. Read you and I'm checking with experiments.
DMP Okay.
CC-H Thanks Deke. Experiments doesn't want anything now
and we'll watch it for a while.
DMP Okay.
ACDR Okay Bo. You should have biomed on me.
CC-H Roger, I'll check with the surgeon.
CC-H We're getting good data - -
CMP - - activation is complete.
CC-H Roger. Understand and you're clear to enable all
the thrusters except the AC roll, of course, after the completion
here and the covers are CLOSED.
CMP Okay, covers are CLOSED and after, what else?
CC-H And, of course, you're also clear to do that activa-
tion of the primary evaporator and waste stowage vent valve as shown
for the DP down at about 35.
CMP Okay, will do. Thank you
CC-H And Apollo, Houston. For your information a hundred
per cent on the experiment activation. Everything looks exactly normal.

END OF TAPE

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CC-H - - and everything looks exactly normal.
CMP Well, we'll sure try to bring you back some good data in a few days, then.
CC-H Roger.
ACDR Okay, Bo. As far as looking ahead to the flight plan now that we've finished that. Okay, we're going to activate the primary activator now - waste stowage vent.
CC-H Roger, sir. And after your exercise, I guess we'd just like you to settle down and eat and get ready for the presleep checklist.
ACDR All right. Yes. What was supposed to be a relaxed day turned out rather busy.
CC-H We all agree.
ACDR One thing, Bo. When you look at this whole sequence, this thing is so small and so loaded compared to some areas - some I think of Skylab, or even some of the other command modules. When - one person (garble) he just can't do it. He can't do anything in parallels, gotta be in series on a lot of it.
CC-H Understand.
ACDR Okay, Bo. And one last thing before we lose you on ATS. You want us to go ahead and maneuver to our solar inertial sleep attitude when we over the hill?
CC-H That's the attitude that you're now in.
ACDR Oh. All right. Well I'm checking up on the angles here.
CC-H Apollo, Houston. We did miss one little item there. And that's under the CP where it says enable all jets and configure the DAP. That will then get you in the proper sleep configuration. You're all ready in the proper attitude.
ACDR You want us to take care of that? And Bo, one last thing here - we're still in contact?
CC-H Roger. We're still in contact. We've got about two minutes.
ACDR Okay. It's got outlined in red there it says "configure DSE low bit rate record command in reset." Do you want that done? It's at about on the flight plan, 34:54.
CC-H Negative. That went with the raster scan it's not required. And, Tom, you're completed. We've got enough data on you and you can unplug your OBS if you wish, but continue with your exercises.
ACDR All right.
CC-H Apollo, Houston. There's about a minute until LOS and we'll see you at Orroral at 35:08 for a couple of minutes.
ACDR Roger.
CC-H Apollo, Houston through Orroral Valley for two minutes.
ACDR Roger, Bo. (garble) mention about the VTR coolant activation procedure.
CC-H Roger, Apollo. We would like that VTR coolant activation. Apollo, Houston. There is one minute until LOS. Next AOS will be at Hawaii at 35:26.
ACDR Roger. Houston, Apollo.
CC-H Apollo, Houston. Go ahead.
ACDR Okay, Bo. One question. On those little (garble) dosimeters

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that we had on our underwear - what do you want done with those? We also have big personal dosimeters with counters on them. Do you want these brought back?

CC-H I'll check.

CC-H Apollo, Houston through Hawaii for five minutes.

ACDR Roger, Bo. How do you read? Okay?

CC-H Roger. Read you okay. We have one item that has to be done and that is at 36 hours we would like to terminate BATT A charge and initiate BATT B charge. And I've got a question for you. Would you like us to get some news together here for your dinner period when we get into ATS coverage?

ACDR That would be great.

CC-H And have you people started to eat yet?

ACDR No. We're just preparing. Vance and Deke are preparing and I'm taking exercise, over.

CC-H Understand.

END OF TAPE

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CC-H Apollo, Houston, there is a minute to LOS. Next is
Goldstone at 35:37.

ACDR Okay, Bo. Eeal fine.

PAO Apollo Control, ground elapsed time 35 hours, 37
minutes. We'll have Goldstone contact in 2 minutes. As Apollo crosses
the Oregon Coast on this pass Soyuz is approximatly 1475 nautical miles,
ahead - -

CC-H - -then through Goldstone in about 2 minutes, standing
by.

PAO Apollo is closing on Soyuz at approximatly 138 miles,
on each revolution.

END OF TAPE

ASTP (USA) MCL51/1

Time: 19:08 CDT, 35:38 GET

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CC-H Apollo, Houston. There is 1 minute until Goldstone
LOS. ATS LOS is next at 35:48.

ACDR How do you read, Bo/

CC-H Read you, Tom. Go ahead.

ACDR Oh. Okay. We're just changing headsets. Working
on food around here.

CC-H Okay. We don't have anything for you on this pass.

END OF TAPE

ASTP (USA) MISSION MC152/1
Time: 19:08 CDT, 35:48 GET
Date: 7/16/75

CC-H Apollo, Houston, through ATS, - will you go accept
please for us?

ACDR You've got accept, Bo.

CC-H Roger, and we have some - evening news here if -
you people are ready for that. Are you eating yet?

ACDR Stand by just one minute, and we'll get you on the
squawk box.

CC-H Okay, well when you're ready just call us.

ACDR Okay, Bo. Go ahead.

CC-H Roger, as you might have guessed. Dominating the
news wires yesterday and today are stories about the successful launches
of the Soyuz and Apollo spacecraft. Yesterday morning President Ford and
Soviet Ambassador Dobrynin watched and applauded the Soyuz launch at
the State Department auditorium. President Ford said the launch marks
the beginning of a very epic adventure into space, and was blazing a
brand new trail. Dobrynin traveled to Florida, with NASA administrator
James C. Fletcher to view the launch. President Ford watched the
launch at the White House on television and was briefed by former
astronaut Harrison Schmidt, who is now assistant administrator for NASA,
office of Energy Programing.

CC-H Second article is - Washington, the output of the
nation's factories, mines, and utilities rose in June for the first time
since last September providing further evidence that the deepest re-
cession since World War II may be ending. The Federal Reserve Board
reported Tuesday that Industrial productions rose 0.4 of a per
cent in June. Output of consumer goods, including automobiles, and
household appliances, rose, offsetting declines in business equipment,
and many materials, such as steel that businesses use in manufacturing.
The reason is that although production of consumer products has been
increasing at a rate fast enough to end the decline in output and produce
real growth, a revival of the consumer sector by itself is not sufficient
to induce a strong recovery. One government economist said the consumer
sector is leading the way. A little more time will have to elapse before
businesses begin to increase the amount of money they will spend on
plant and equipment. Third item. Tokyo, Japan plans to put cherry
trees on the U.S. west coast, and a three million dollar theatre in
Washington, D.C., as bicentennial gift to the United States, the Prime
Minister's office said today. A committee hopes to complete the details
in time for Prime Minister Takeo Miki to announce the gift when he visits
President Ford in Washington in August the spokesman said. The
550 set theatre would be on the top floor of the Kennedy Center, in
space set aside when the center was built in 1971. Fourth article -
a 2000 member letter carriers nation - union here will join in a nation
wide postal strike if one is called, John Estes, Vice-President of the
local unions said. The President of the National Association of Letters
Carriers, in Washington, threatened a nationwide strike if union and
management officials don't agree on a two year contract for 600,000

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postal workers. "There will be no mail deliveries next Monday, if we can't reach an agreement within a week." Even though postal workers are forbidden by law from striking, it was said that "if we have no contract, we will have a right to withhold our services." Owen Young, public service officer with the post office here said "we don't know how many workers will stay off the job in during an illegal strike. As far as we know, negotiations have not yet broken down, and we are assuming there will not be an illegal strike." Despite the unlawfulness of the strike, about 220,000 postal employees struck in 1970, when a 14 percent pay raise ended the walkout. Here's one about sports. In other news around the nation a two run single broke a ninth inning tie and led major league baseballs national league all stars to a 6-3 victory over the American League last night. Secretary of State Henry Kissinger threw out the first ball in the game, and the second too, as a matter of fact, when Rod Carew of the Minnesota Twins who caught it wasn't satisfied. For Carew's benefit and that of photographers, Kissinger threw again. Last item, New York Joe Namath says he wants to play with the New York Jets, two more years. On that optimistic note, Broadway Joe Namath began final football negotiations with the Jets today. Neither he nor his attorney are taking a hard line. We never had any serious problems, Namath said of his dealing with the team that signed him to a 400,000 bonus, when he came out of the University of Alabama ten years ago. Namath, fresh from signing a 5 million dollar contract to sell perfumes and cosmetics, went to join his attorney Jim Walsh in a bargaining session with the Jets president Phil Iselin and the team's lawyer Dick Barovick. And the last item I have is from Paris. Police arrested two men for climbing the city's tallest skyscraper with mountain picks and ropes, alpine style. Police said that the occupants of the 58 story Monfarna State Tower complained that the Alpiners, were ruining the side of the American designed building by sticking their sharp pointed steel picks into the window frames. The police report said the men were asked why they decided to climb this building and replied "because it's there."

ACDR Very good. Well, Bo, thanks so much for the news. It was very interesting, all of it. - -

END OF TAPE

AGTP (USA) MCI53/1

Time: 19:18 CDT, 33:58 GET

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ACDR (Garble)
ACDR Ah, hi Bo. Thanks so much for the news. Very interesting.
All of it.
CC-H Roger.
CMP Can't blame you guys for wanting to go to higher altitudes.
CC-H I can't either.
ACDR Houston, Apollo.
CC-H Apollo, Houston. Go ahead.
ACDR Yeah, Bo. You might pass on to Farouk there's
tremendous difference down here in this orbit we're at now, com-
pared to what we used to fly in Gemini up at 140 to 185 miles as far as
in observing features.
CC-H Roger. What kind of differences?
ACDR Well, as far as detail.
CC-H You can see a lot more from this orbit?
ACDR Oh. Tremendous more. Also, looks like you're a
lot closer too, comparatively speaking.
CC-H Roger. Understand.
PAO Apollo Control. Ground elapsed time 36 hours.
We will take the line down now, to give newsmen and visitors to the
center an opportunity to review yesterday's Soyuz launch and Apollo
launch. This is an edited version of the two launches lasting
approximately 15 minutes. This will also include the onboard TV
camera in the command module during launch sequence. We'll bring up -
We'll record any conversations between the ground and mission control -
and Apollo and play that at the close of this TV.
CC-H Apollo, Houston. You can go BLOCK on the computer,
now.
ACDR Mark.
CC-H And we'd just like a subjective opinion how you
think the temperature in the cabin is. We think we've got a configuration
that should be suitable and the one we're planning to fly with.
CMP I guess it's pretty reasonable, Bo. We all enjoy
going up into the DM though. It's cool and nice.
CC-H Roger. We copy. And Apollo, I have just a couple
of things that need to be gotten up to you. I owe you a couple of
block data pads before you go to bed tonight and so when you have a
chance, please call me and I'll give you these and ask you a couple of
questions, but it looks like you're eating right now, so I'll let you
finish that.
ACDR Okay.

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CC-H Apollo, Houston. I hate to bother you, but if some-
one has a chance we would like to terminate BAT A charge and initiate
BAT B charge.

CC-H Apollo, Houston. We hate to bother you, but if some-
one has a chance we would like to terminate BAT A charge and initiate
BAT B charge.

DMP Vance at work, Bo.

CC-H Thank you.

END OF TAPE

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Time: 19:38 CDT, 36:18 GET
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CC-H Apollo, Houston. We'd like to have somebody give
us a VERB 74.
ACDR Say again, Bo?
CC-H A VERB 74, please.
ACDR Roger.
CC-H And we have about 15 minutes left in this ATS pass.
Whenever you're ready, we have a couple of items - items - to go through
here and we'd like to be able to say good night. See you at the end of
this pass.
ACDR Okay, stand by.
ACDR Okay Bo. Go ahead.
CC-H Roger. I have a couple of questions. One is, we'd
like to verify the position of the B MAG 1, that it is now on OFF.
ACDR That's affirm. B MAG 1 is OFF.
CC-H Roger. Thank you.
CC-H And I have a question about the CM height measurements.
We would like to know what the measurements were on the CM height last
night. They are in the Experiments Checklist on page 170 - on 160.
That's page 160, Experiments Checklist.
ACDR Okay, stand by.
CC-H And while you're looking through the books, I
have some block data here.
CMP Houston, Apollo.
CC-H Go ahead.
CMP Okay, here's the data on the 1-60, Bo, CM measurements
at GET, 5 plus 52. Seated height 15.5 (garble) centimeters, relative
height 92 - 27 centimeters.
CC-H I understand. 5:52, 15.5, 27.6.
CMP Right on.
CMP And turning to your block data, stand by.
CC-H Roger.
CMP Ready to copy block data.
CC-H This is for rev 33. 058, 34,55 minus 179er 2, plus
all balls, plus 0166, all balls, 113, 001, 1619, 0008, 007, 16252,
25729, 1919, 2040; and A, 309, 050, 2634, 2919, plus 1207, minus 15972.
Notes 1, assumes no further rendezvous maneuvers; 2, assumes rendezvous
REFSMAT; 3, CM-SM sept yaw right to 046 degrees, NOUN 48, pitch plus 0.45,
yaw trim minus 0.34, CSM weight 27700. DM weight 4622. Over.
CMP Okay Bo, block data pap rev 33, NOUN 33 starting
058, 34,55, minus 1792 plus all balls plus 0166, 000,113, 001, 1619.

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CMP - - pluss all balls, plus 0166 000 113 001 1619
0008 007 16252 25729 1919 2040 NA309050 2634 2919 plus 1207 minus 15972.
Remarks, assumes no more rendezvous manuevers; rendezvous REFSMAT CM-SM
sep should be yaw right 046 degrees, down 48, pitch (garble) .45, yaw
minus .34, CSM weight 27700, DM weight 4622.

CC-H Roger. That's a good readback and I have rev 48
for you.

CMP Okay. I understand. You have another block data.

CC-H Roger. Are you ready to copy?

CMP Ready.

CC-H NOUN 33 082 13 55 minus 1986 plus all balls plus
0236 008 328 344 1818 0008 195 15719 25772 2554 2708, NA 037 293 3220
3540 plus 1397 minus 16283. Notes, assumes rendezvous, 2) assumes
orbital REFSMMAT, 3) CM-SM sep, yaw left to 300 degrees. Note 4).
NOUN 48, pitch trim plus .45, yaw trim minus .34. CSM weight, 27300;
DM weight, 4622, over.

CMP Okay readback, Bo. Rev 48. 082 13 55 minus 1986
plus all balls plus 0236 008 328 344 1818 0008 195 15719 25772 2554
2708 037293 3220 3540 plus 1397 minus 16283; assumes redevous maneuver
is already done; assumes orbital RESFMMAT; yaw CSM-SM sep, yaw left to
300 degrees; pitch trim plus .45; yaw minus .24. CSM weight, 27300,
DM 4622.

CC-H Roger. The yaw trim was minus .34.

CM Yaw trim minus .34.

CC-H Roger. And everything else was a good readback.

CMP Roger.

CC-H And, Vance, did you change out the LOH? And the
reason we're asking is we haven't seen much change here in our data.

CMP No. We haven't started on the presleep checklist
yet. And we'll stand by.

CC-H This was back about 34:30

CMP No. I guess we had a mis-coordination up here and -
we did - that one didn't come through.

CC-H Okay. It's no problem. We just wanted to make sure
you got it before you go to bed.

ACDR Bo, that was (garble) flight plan, Bo. We are in
the middle of doing that SIM activation.

CC-H We understand. And one other item and that was about
that umbilical for the exercise. How - you say it's just too short to
be able to exercise comfortably up in the DM with the umbilical attached
down in the CM.

CMP Bo, it doesn't stretch into the DM but let us take
a look at it tomorrow in the tunnel area, okay?

CC-H Well, we'll take a look at it down here and see how
long it is. It's the DP's that has the longest cord.

CMP And do you want the suit hose attached to the VTR
all night? Or could that serve as a cooling in here?

CC-H I'll check with INCO.

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CC-H Apollo, Houston. It seems that we don't need it on the VTR but we'd like it on the VTR. And we feel that all that heat probably comes into the cabin wherever it is.

CMP Okay. Very good. I slept next to the VTR last night and I know it's hot.

CC-H Okay.

CMP Houston, Apollo.

CC-H Apollo, Houston. Go ahead.

CMP Okay. And I think the argument for really the reason why I asked if we could have those hoses not on the VTRs, it get good circulation. I think that's why the DM is so cool. We have two hoses circulating air in there. Of course we can leave the cabin fans on all night. But, as you know, you know they're pretty noisy.

CC-H Roger. We have about a minute and a half through LOS. And we think that you can turn the three VTR power switches to the OFF position for this evening and leave the hose in the cabin if that's what you wish to do.

CMP Okay. Thank you very much.

CC-H Apollo, Houston. We will see you at Orroral here at 36:41 just a couple of minutes from now.

CMP Okay. Very good.

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CC-H - - couple of minutes from now.
CMP Okay. Very good.
CC-H Apollo, Houston. Through Orroral for a little over
a minute.

ACDR Okay.
CC-H Apollo, Houston. There are 30 seconds until LOS,
we'll say good night to you and the wake up time will be as scheduled
on the flight plan.

CC-H That's Hawaii at 44:50.

ACDR All righty.

CC-H (Russian)

ACDR (Russian)

CMP (Russian)

CC-H (Russian)

CMP Cannisters changed.

PAO Apollo Control. Ground elapsed time 36 hours, 44
minutes with a good night to the crew Apollo. They're completing their
second day in orbit. Tomorrow, their big day, rendezvous and docking
with the Soyuz spacecraft. The start of a 43 hour joint operations
plan where the crew members exchange places in the vehicles and perform
joint experiments. Today's activities were slightly altered due to the
problem with the probe, as a result on, two separate experiments were
deleted from the flight plan. Tomorrow, shortly after 9 a.m. in the
morning Apollo and Soyuz will be within a range to talk with each other.
This will occur as the Apollo and Soyuz spacecraft conclude the 27th
revolution of the Earth. Approximately 180 nautical miles west of the
coast of Chile, just below Santiago, this is the closest approach of the
two vehicles; however, at that time there is no tracking station. They
will come in contact with the Santiago tracking station shortly there-
after. At ground elapsed time of 36 hours and 46 minutes, this is
Apollo Control.

END OF TAPE

ASTP (USA) MC158/1
Time: 20:21 CDT, 37:00 GET
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PAO Apollo Control. Ground elapsed time 37 hours. A report here at the mission control center on, via the closed circuit system from Soyuz, reporting all systems are functioning normally aboard Soyuz. The crew has accomplished the corrective pressure dumps of the 2 vehicles - the docking and orbital modules. They say TV cameras TK1 and TK3 are in operation at this time. And additional analysis has been taken to check the possibility of both cameras TK2 and TK4 to provide proper operations. The Soyuz crew has been in their sleep period since ground elapsed time of 31 hours and 30 minutes. The - tomorrow morning shortly before 9 a.m., the two crews will be in position approximately a hundred miles, a hundred nautical miles apart. They'll be able to use their onboard radios to talk with each other. This will occur in the South Pacific off the coast of Chile, at approximately 1800 miles west of the coast of Chile. Wakeup time for the Apollo crew is 4:10 in the morning, 4:10 central daylight time, to start their busy day of rendezvous and docking following several maneuvers. Wakeup time for Apollo crew will be at ground elapsed time of 44 hours and 50 minutes or 4:10 central daylight time. At ground elapsed time of 37 hours and 2 minutes, as Apollo and Soyuz come closer to close - closer and closer together with closing the gap at about 138 miles per rev. At ground elapsed time 37 hours and 2 minutes, this is Apollo Control.

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ASTP (USA) MC159/1
Time: 22:31 CDT, 39:11 GET
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PAO Apollo Control, ground elapsed time 39 hours, 11 minutes. Apollo crossing South Afr - America, crossing into the South Atlantic, approximately 1200 miles behind Soyuz now, each revolution picking up 138 miles approximately on the Soyuz spacecraft. Wake up time for the Apollo crew, now asleep for more than 2 hours, will be 4:10 a.m., central daylight time tomorrow. Thursday, the day scheduled for dock scheduled for docking of the first two, first international docking of spacecraft. Ground elapsed time, 39 hours, 12 minutes, this is Apollo Control.

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ASTP (USA) MC160/1
Time: 23:45 CDT, 40:25 GET
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PAO 40 hours, 25 minutes, ground elapsed time, this is Apollo Control. Apollo presently on revolution 22, just a little over a thousand miles northwest of the Soyuz on its orbit 26. Soyuz is presently over northern South America and the Apollo is traversing the Yucatan peninsular. No real problems here in Mission Control. The American crew presently asleep, tomorrow being a very big day, the docking occurs tomorrow morning with the initial greeting between Commanders Stafford and Leonov, shortly after noon tomorrow, around 2 p.m., central time. Our next status report will be 41 hours and 26 minutes, ground elapsed time. At 40:26 this is Apollo Control.

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ASTP (USA) MC161/1
Time: 11:10 CDT, 40:50 GET
Date: 7/17/75

PAO 40 hours 50 minutes, ground elapsed time, this is Apollo Control. Both spacecraft now in the southern-most portion of the South Atlantic Ocean, approximately 1000 miles apart. Off-going flight director, Neil Hutchinson, moments ago left mission control, heading on his way over to the auditorium for a change-of-shift briefing scheduled at 12:15, five minutes from now. We'll bring that press conference over PAO release when Neil Hutchinson arrives. At 40:50 GET, this is Apollo Control.

END OF TAPE

ASTP (USA) MISSION MC162/1
Time: 00:49 CDT, 41:26 GET
Date: 7/17/75

PAO 41 hours, 25 minutes, ground elapsed time. This is Apollo Control just concluding the change of shift briefing with flight director Neial Hutchinson. A few questions apparently arose as a result of that briefing - on differences being given by the Soviet Control Center for the - nominal distances between the Soyuz and the Apollo and figures being provided by Apollo Control. Maybe we can straighten that up. We've been using a nominal closing rate of about 138 miles for every revolution, which is about an hour and 28 minutes. And working with those figures, right up through - docking which is scheduled to occur at GET 51:55 on revolution 29 we have the following Apollo Soyuz separation distances by revolution number and GET time. At 41:04, on Apollo revolution 22 the Apollo, was roughly 1061 miles behind the Soyuz. On revolution 23 at GET 42:32 that distance will decrease to approximately 123 miles. Revolution 24 at 44:00 GET distance will be 684 miles. At 45:28 GET, or on revolution 25 that distance will be reduced to 547. At 46:56, revolution 26, the Apollo will be 409 miles behind the Soyuz. On revolution 27 at GET 48:24 the Apollo will be 270 miles behind the Soyuz and will be within sextant sighting range and VHF radio range of the Soyuz. At GET 48:50 the Apollo will indicate whether or not communication has been established with the Soyuz. And on revolution 29 at GET 51:55 the Apollo is scheduled to dock with the Soyuz. Now those figures work out very close using one hour and 28 minutes, as the orbital period for the Apollo, and a closing rate of 138 nautical miles per revolution. No really intensive activity here at mission control. Flight director Don Puddy, and CAP COMM Bob Crippin now on duty with team three. Just getting involved in working a procedure for the multipurpose furnace MA010 on the Apollo. Our next status report is scheduled for 41, - excuse me 42 hours, and 26 minutes, ground elapsed time at 41:29 this is Apollo Control.

END OF TAPE

ASTP (USA) MISSION MC163/1
Time: 01:47 CDT, 42:26 GET
Date: 7/17/75

PAO - - Tom Stafford, Deke Slayton, and Vance Brand.
PAO 42 hours, 26 minutes, ground elapsed time, this is Apollo Control. The American crew still has about 2 hours, and 4 minutes of sleep time remaining. Spacecraft presently or approximately 823 miles apart. The Soyuz is directly south of Africa, and the Apollo, about 823 miles southwest of that in the middle of the South Atlantic Ocean. Very shortly following this ATS pass, we'll be replaying video. This is not live video, it's a video tape. The launch and the first Apollo video, the flight team here has requested- has requested that this video be shown at this time. There's no audio that will be associated with this video. The American crew on this mission is carrying eight different items with them commemorative in nature. They consist of four U.S. versions of the docking certificate, ten of the American flags measuring 8 by 12 inches one large 3 by 5 foot American flag, two U.S. halves of the commemorative docking plaque, two U.S. halves of the commemorative docking metals one container of tree seeds presented by the United States Forest Service. These are superior white spruce. The parent trees, which were used to produce the seeds, were grown in Rhinelander, Michigan [sic]. the climate closely matches that of Moscow, where these seeds are expected to be grown. The American seed gift, will contain enough seed for one acre to be planted. In addition to that, one United Nations flag which will be launched with the Soyuz will be returned on the Apollo. And the Apollo, is also carrying three copies of the international space agreement signed between the two nations. Tomorrow, letters and flags will be exchanged. Each joint meeting between the crews, will result in certain transfers, of these different items. Tomorrow the flags will be exchanged. At 42 hours, and 29 minutes ground elapsed time. This is Apollo Control.

END OF TAPE

ASTP (USA) MC164/1
Time: 02:44 CDT, 43:24 GET
7/17/75

PAO 44 hours, 24 minutes, ground elapsed time, this is Apollo Control. Apollo and Soyuz very close to each other right now, both of them west of Central America. This is revolution 23 for the Apollo. They should be about 700 miles apart now, closing at the rate of about 138 miles per revolution or per every hour and 28 minutes. Crew is scheduled to wake up in about an hour and 15 minutes from now, the American crew. Flight director, Don Puddy, discussing with his flight team here in mission control while back, about the problem with the MA010 multi-purpose furnace. Apparently the problem is in the helium injection system, the helium is used as a rapid cool down. The furnace normally cools down with the helium apparatus in about 5 hours, cooled to touch, and it's still fairly warm even after 5 hours. Without the helium injection system the furnace would take considerably longer to cool down. At about 400 degrees cooler than the temperature at which the furnace is when the helium is normally injected, air is injected to further facilitate the cooldown. This system can still be used, but as a result of that problem with the helium injection system, flight director, Puddy, thinks that they may be cancelling one of the scheduled multi-purpose furnace experiments. Not completely positive at this time whether it will be cancelled, but it's a possibility. The Soviets seem to have resolved to the television systems problem aboard the Soyuz. Apparently the problem existed in the switching facility and not in one of the cameras. Those cameras can be hard wired to the television transmission unit and that's what the Soviets intend on doing at this moment. It takes about 2 minutes to change the connections between the Soyuz cameras whereas with the switcher it naturally took only seconds. However, all four Soviet cameras are working. At 44 hours and 26 minutes we'll have our next status report. At 43:27 ground elapsed time this is Apollo Control.

END OF TAPE

ASTP (USA) MC165/1
Time: 03:25 CDT, 44:04 GET
7/17/75

PAO 44 hours and 4 minutes, ground elapsed time, this is Apollo Control. The Soyuz is presently over the island of Madagascar and about 680 miles southwest the Apollo, presently on their orbit 24. The Apollo crew had two caution and warnings this evening related with the guidance system transients. And we've had about 7 minutes worth of related air-to-ground conversation between CAP COMM, Bob Griffin, and Vance Brand and Tom Stafford concerning those caution and warnings. The crew is now awake so we'll replay the 7 minutes worth of air-to-ground and then go live. Right now the air-to-ground.

CMP Houston, Apollo (garble).

CC-H We are with you Vance, how do you read?

CMP Pretty good Crip. Got a little something to report to you here.

CC-H Okay, we've been noticing you on the DSKY and seeing the SCS and we noticed that an alarm, ICDU alarm - What did you all figure out?

CMP Well, at 43:20 approximately we got a program alarm, ISS light, alarm 3777 came down here went under SCS control, wide dead-band. I kind of looked into it, the ball, the FDAI that is, and the NOUN 20 seem to agree. With that in mind why we just had a few minutes to wait, so we thought we wouldn't change anything so that you could look and try to determine what caused the alarm.

CC-H Okay, we're looking at it right now and it's looking good. Incidentally Vance, we also showed about 42:32 that apparently you guys had a C&W onboard and reset it and we never could find anything here. Can you enlighten us on that?

CMP That's right. A couple of hours ago we did have an alarm. I came down and looked and there wasn't anything on the display panel. It was a transient apparently, so we turned it off and went back up. And we have BMAG 1 up now and we had drifted off a little bit in attitude. I don't know if happened when the alarm occurred or if it happened mainly because I was in SCS waiting for BMAG 1 to come up. But I sort of wanted to try a P52 to see how it all looked, but noticed that - and I'm supposed to call a VERB - or a new program with this alarm - with this JET FAIL alarm EMP running, so decided to wait until you came up.

CC-H Okay, that disables it. Let's find out what - specifically what course of action we want you to take here.

CMP Okay.

CC-H Vance, can you tell us whether you think you might of been out attitude when you selected SCS control and the fact that the B MAGs weren't warmed up - or weren't up yet might have caused that - caused you to go out of attitude, rather? Vance, you still reading us okay?

CMP Roger. Loud and clear. I guess you didn't get my last - I said, I think it's possible that we could of drifted off while I was in SCS, waiting for BMAG 1 to come up.

CC-H Okay, that's what we think probably - probably occurred right now. We didn't have data on that particular portion of it so that we could tell - tell you exactly what happened. Right now to make you feel more comfortable, at least, everything looks hunkydory here and we - it could of been a transient problem of some nature.

ASTP (USA) MC165/2
Time: 03:25 CDT, 44:04 GET
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CMP Okay. Is it okay with you if I go back to space-craft control CMC then?

CC-H We would recommend that. Go ahead.

CMP Okay and how about BMAG 1? Should I leave it power it down again?

CC-H We recommend leaving it up.

CMP I thought so. I think that'd be neat. I'll tell you that alarm sure wakes up a crew, I mean especially the three 777.

CC-H I'm sorry Vance, I couldn't get all that, would you say it again about the 777?

CMP I say that - that sort of alarm sure wakes up a crew.

CC-H Oh yeah.

CMP And makes them very alert.

CC-H Roger, understand that. Vance, we expect that we had some kind of a transient in the CDU right now. We're not positive as to what it was.

CC-H Vance, can you tell us whether you did a VERB 40 after you saw the alarm?

DMP He calls negative. He did not do a VERB 40. And also when we had the warning, Crip, we also had the orange ISS light for a while.

CC-H Yeah, we understand. From - -

CMP Crip, I did not do a VERB 40 although I was tempted to. I did not do a VERB 40 because it looked like the ball agreed with NOUN 20. But I wonder if you would like one now to make sure they're really synched real good.

CC-H Negative. We were just asking here so that we would understand what our data was showing us.

CMP Right.

CC-H Okay. Our recommendation is that you get a little more sleep because you certainly got a heavy work day tomorrow and hope to start off here - oh, in about another 52 minutes. Why don't one of you get on the headset such that if we got a problem, we can holler at you or hear the alarm and go ahead and get you to secure the speaker box. And try to get some more rest, we're going to be with you through the ATS here for about another 40 minutes if you need to holler at us.

CMP Okay. Very good. I guess we have an EMP to help out on problems like this, don't we, incidentally, if we find that we have this sort of a problem? Okay, we got another one, Crip. ISSS[sic] and (garble) a light and PGNCS light.

CC-H Okay. Copy that. We're looking.

CMP 3 and triple 7. And I'll hit a reset whenever you say.

CC-H Stand by 1. Your attitude is looking good, looks like no problems on that.

CMP Right.

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CC-H Okay, we show you got another one.
CMP Right. And another one.
DMP We got one down below. We have the PGNCS and the ISS.
CC-H Apollo, Houston. Up the (garble) SCS there. We believe
that you're getting false alarms right now and we're looking at some
way to mask it.
CMP Okay.
CC-H Apollo, Houston. I guess to take out one more
variable here, we recommend that we go ahead and terminate the jet
on monitor EMP by reselecting POO. It's masked anyway, but I have - the ISS
light on there and to make you feel comfortable we're going to be watching
you on - most of the time anyhow.
ACDR Roger. Real good, Bob. I will go ahead and select POO
right now. Okay, do you want me to reset the program alarm?
CC-H Yes, you might as well go ahead and reset it, Tom.
ACDR We still have just the ISS (garble).
CC-H Copy.
ACDR Houston, Apollo.
CC-H Go ahead.
ACDR Okay and now, Crip, our ISS sublight has gone out.
I don't know exactly when. I reset the master alarm, but the ISS
sublight stayed on for a while, and while we were working around here,
suddenly it went out.
CC-H Okay, and we're also watching that, Tom. We've
got a repeater on those lights down here, Tom. And we saw it go out and just
can't seem to correlate it to anything. But that's being driven by an
ICDU failure indication, which there seem to be a fault - -

END OF TAPE

ASTP (USA) MCL66/1
Time: 03:35 CDT, 44:15 GET
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CC-H - - just can't seem to correlate it or anything, but that's being driven by an ICDU failure indication which seems to be a false one.

ACDR Yes. Let's hope.

CC-H Roger that.

ACDR There's nothing more to wake the crew up then an ISS (garble) light on the day of rendezvous.

CC-H Roger. Alpha did a pretty good job on GNC.

ACDR Damn. The light's back on again.

CC-H Okay.

CC-H Apollo, Houston. Tom, we'd appreciate it if you would go ahead and refit that alarm. What we're trying to do - and if you could, if you would do that as a matter of course if it reoccurs. The only thing that we've been able to see down here is the possible correlation with them pitch firing. We're trying to understand that - keep an eye on it although - can't understand why that would be occurring right now.

ACDR I can't either - we're in SCS and (garble) DEADBAND.

CC-H Yes. We're watching. That's fine. We see you there and there's no problem with just going in and stay there.

ACDR Okay, (garble). Hey Crip. For the ECS types - with those you know two sets of hoses feeding in the docking module, it really got cold up there. So we're just going to just operate with one set of hoses into the docking module. Over.

CC-H Okay. We copy that. Just for the record here can you tell us which set you're gonna leave up there, Tom?

ACDR (garble) the center set. The center hose.

CC-H Copy that.

ACDR Crip, we just had a roll jet fire, looks like.

CC-H Roger.

ACDR Do you want me to damp it? Okay, I've gone to min - impulse and damped the rate back to rate command.

CC-H Roger. I didn't understand why you went to min/impulse and stopped the rate. Would you repeat that, Tom?

ACDR Yes. In other words we're SCS and we suddenly heard the thing fire and then built up a rate roll about 0.2 of a degree per second. So I went to min/impulse. Also had a little (garble) to minimpulse and damp. We're in SCS control. In other words if I hadn't adapted it we would go ahead and probably hit the DEADBAND and it would have pulled it back the other way some.

CC-H Roger. Understand, just working another DEADBAND would have been okay.

ACDR I'll say one thing. While they got the GMC people working on that. Somebody - no time critical thing - give us a how-goes- it with respect on how we're doing on our budget on RCS and H2 and O2.

CC-H We'll get that up to you.

CC-H AC, Houston. Tom, for your information on consumables we're right on on H2 and O2 and on RCS propellant we're 39 pounds below the nominal line and of course you remember in the flight plan supplement, we got