

SL-III MC-923/2

Time: 20:40 CDT, 23/01:40 GMT

8/18/73

SCIENCE
QUES

PAO Skylab Control at 1 hour 44 minutes and 21 seconds Greenwich mean time. At the present time we're out of range of the Bermuda tracking station. Our next acquisition of signal will be at Madrid approximately 2 minutes and 40 seconds from now. At the present time, Mission Flight Controllers are completing an enrichment of the space station's atmospheric oxygen supply by releasing additional oxygen gas. The partial pressure of oxygen, will be increased to about 4 pounds per square inch, with the total spacecraft atmospheric pressure being raised to about 5.7 pounds per square inch. Standard pressure on the spacecraft is 5.0. At the present the partial pressure of oxygen is 3.7 PSI and cabin pressure is 5.5. The oxygen enrichment tonight, is necessary - is a necessary prelude to the use of T020, the foot control maneuvering unit scheduled for first use tomorrow by Commander Alan Bean. Jack Lousma will capture the experimental flight on the television video tape recorder. T020 like the other maneuvering units aboard Skylab, uses nitrogen gas for propulsion. In order to maintain a proper percentage of oxygen gas in the space station atmosphere, controllers must first increase the oxygen content before using the maneuvering equipment. Then after some 10 to 18 pounds of nitrogen are released in the test flight, the excess oxygen and nitrogen will be allowed to escape into the waste tank. By increasing oxygen tonight before releasing the nitrogen from the foot control maneuvering unit tomorrow, the necessary balance of nitrogen and oxygen is maintained. Oxygen levels are usually kept between 66 percent and 73 percent of the space station atmosphere. We'll remain live for air-to-ground from Madrid approximately 1 minute from now. This is Skylab Control remaining live.

CC Skylab, Houston through Madrid for 8 minutes.

CC Skylab, Houston. On your M509 run number 3 or DAC 3, which feet position was used?

SPT Stand by a minute here Hank. Still checking.

CC Okay. While they're checking there, SPT, on mission day 20, you gave a report saying you gave Arabella some water, did you also give water to Anita?

SPT Affirmative. Would be nice if I had a sponge, I could give her some water with, but all I could do was to sort of blow a few drops of water down into the container.

CC Roger. We copy.

PLT (Garble) position Delta. And Al's got a couple of words for you.

H₂O
ANITA?

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CC Okay.
CDR And, don't dump that VTR recorder yet.
We'll let you dump it in another - in a little while. Is that okay?
CC Okay. We had planned to dump it on the next CONNUS pass. That's about an hour from now.
CDR Okay. We'll be - we'll be in good shape by then.
CDR How much time's left on there now, by the way?
CC And ah - Skylab be advised the video switch is in the monitor position. If you recorded something recently, it might not have gotten on.
CDR That's what we think. And we want to record something over the last couple of minutes. How many minutes are left?
CC Okay. There are 3-1/2 minutes left and the previous 2 minutes was on the TV on the ATM monitor.
CDR Okay. We'll put it on the last three. Thank you.
CC Okay. We'd like to run through some comments and questions from - Bob had here, in the couple of minutes we have left here. Would the CDR be willing to have a M131-1 scheduled on himself. We're just interested in your comments concerning the OGI. And also we've got some baseline data, that we could use.
CDR You bet. Be glad to do it. ~~YES~~
CC Okay. We copy. And we'd like to know if anybody's had any problems with taking a shower, since there's low hot water pressure. ~~SHOWER?~~
CDR Jack's the only one that's had a shower, we'll ask him.
PLT Yeah. It worked great, Hank. Got a clean Marine.
CC Okay. Sounds good. Now a little bit on the hemoglobin and urine specific gravity. Hopefully the hemoglobin determinations from the finger stick or ear-lobe stick blood will prove to be more accurate and more easily to accomplish. The specific gravity of urine is also very important when done in conjunction with the hemoglobin determination, since both reflect the body fluid first status. The urine specific gravity procedure in permanent message number 15, that we sent up was an attempt to simplify. Do you think this is going to help it a little bit?
SPT We're familiar with the message and I think it will simplify and it'll be no problem.

M131 ON
CDR?

SHOWER?

URINE
SP/GR
AND
H/bg

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CC Okay. We are evaluating, still, both the hemoglobin and specific gravity procedures to shorten them as much as possible.

SPT Okay. I don't think there's any short-cut on hemoglobin. And we just know - know how to do it, and we just take it so long. We'll have to do a finger stick of course, due to the unreliability of venous blood, but aside from that, we'll just proceed on whenever scheduled.

CC Okay. May - - maybe having the refractometer for urine more accessible will cut down the time required to do this. And we'll - -

CDR Think you're right. We'll have it staged conveniently.

CDR Looks like we're going to reach the 5.7 cabin pressure before we reach 4.0 CO₂.

CC Roger. We copy. And, Owen, we prefer - the surgeon prefers the ear-lobe stick.

CDR Send him up. We'll stick his ear-lobe.

CC Surgeon says thanks. (Laughter). And, Al, we concur that the 2 hours really puts this into the experiment status. And we'd like to cut this time to avoid the change of status if we can.

CC Subject, exercise: Do you feel a physical need for exercise? If so, has it increased with time in orbit? Please comment on the desirability of a method that would allow prolonged walking or running with near 1-g body-weight loads.

SPT You want to comment on that real time or on channel B. That might take a couple of minutes. What do you want, Hank?

CC Okay. How about putting it on channel A, please.

CDR Okay. You wanted a comment about whether or not we felt a - You were cut out in the middle of your question. Why don't you repeat it quickly?

CC Okay. We would like to know if you feel a physical need for exercise, and if so has it increased with time in orbit? And then also comment on the desirability of a method that would allow prolonged walking or running with near 1-g body weight loads.

CDR Okay. Understand. We'll comment on channel A.

CC Okay. On MO92: We'd like to know if you are currently using blood pressure cuff serial number 0.011, and you can put that on channel A also, if you don't know the number right off.

SPT I know. The answer is yes. We have the other one standing by, in case of a double run, so we could get one that is not too sweaty. But we've been using 011.

MORE

EXERCISE?

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CC Okay. And we'd also like the number of the one you've been using before.

CC You can put that on the recorder.

CDR Okay. I don't remember the other number.

CC And we would like to know if the saddle settings are still 6, 7, and 8, for the CDR, SPT, and PLT?

CDR The last run on the SPT made it 6. So that'll be 6, 6, and 8 from now on.

CC Roger. We copy 6, 6, and 8. And we're about 30 seconds from LOS. Next station contact will be Carnarvon, at 02:21. And that's our med conference.

CC And we - We still have a few more things we'd like to discuss with you, maybe pick them up on the Honeysuckle part of that pass.

PAO Skylab Control at 1 hour 56 minutes and 19 seconds Greenwich mean time. We have lost signal at the Madrid tracking station. Our next acquisition in 24 minutes and 25 seconds will be at Carnarvon. At Carnarvon, we have some medical - some medical conference, which will be private, if there is time left over at the end of that medical conference, they may be expected to hand it over again to Mission Control. Immediately following the Carnarvon pass, we do have a pass at Honeysuckle and expect discussion there. This is Skylab Control at 56 minutes and 47 seconds after the hour.

END OF TAPE

MOY2
SADDLE
SETTINGS