

PAO            Okay, well thanks for coming out this evening. The change of shift press conference with off-going flight director, Bill Reeves. We do not have a person here with us from the payload operations control center to answer your payload questions and so a lot of those, we may not be able to handle but we will address the Orbiter questions. We'll attempt to get someone as soon as possible to answer those payload questions. But at the present time, we don't have someone to address those. Bill, we'll go ahead and turn it over to you to talk about anything we had going on in the last several hours with the Orbiter.

REEVES            Okay, this has been a fairly clean shift. Challenger's proving itself to be a remarkable fine machine as usual. And we are now in a 191 by 190 orbit. We are 145 nautical miles behind NUSAT and still opening at around 8 nautical miles per rev. As far as the Orbiter's concerned, we haven't had any significant systems problems in this mission, of this shift. We did have one new thermostat failure which was on the APU fuel tank line and heater 3A. We just switched to the 3B system and everything is progressing normally. That has no future mission impacts of any sort. And we did manage to cancel the IMU alignment maneuver on this shift due to picking up stars of opportunity for alignment so that was to be expected as well. With that, I'll just open it to questions. I don't really have much to add in the way of system --

PAO            Okay, Craig Covault.

CRAIG COVAULT (AVIATION WEEK)    From a flight director's standpoint, was there any questions asked on the loops relative to the effects, even long term, just overall health hazard effects of perhaps, accidental crew ingestion or inhalation of the monkey and rat feces.

REEVES            Well, the main particulate matter that we're getting into the cockpit so far, we believe to be the food bars and as you probably heard the crew comment, the filtration in the module appears to take it out of the air fairly rapidly. And we do, we have recommended that the crew wear mask during any operations with the rats, the surgical masks just to, just as a precautionary measure. And we have no problem with the air filtration system in the module taking care of particulate matter in the air.

COVAULT            Well, to follow it, I've had the impression and it may be an incorrect impression that from a man flight getting along with flying of primates and a number of animals, there has been not always agreement between those two organizations on how things could go or should go. Have you seen any of that come to the head today in your discussions with --?



REEVES Not from my (garble). No, I haven't.

COVAULT Okay.

PAO Okay, Jules Bergman.

JULES BERGMAN (ABC NEWS) Bill, you said in the cockpit.

REEVES Did I say, I though I said module.

BERGMAN Okay.

REEVES It's in the Spacelab module, itself.

BERGMAN And one, I have two questions. One, don't they carry a vaccum cleaner or a hose type thing into the air filtration system and 1a, can't they scoop them up and 2, Thornton thought it was serious enough to apparently call Overmeyer into the Spacelab module.

REEVES Well, number one, you're correct. There is a vacuum cleaner system onboard and the effort right now is to come up with a method of using both add in plastic bags or whatever to eliminate the particulant matter getting into the cockpit, or not cockpit, the module. As far as seriousness of it, it doesn't appear to be that big of a problem right now.

BERGMAN Three, what will be done in the future about feeding the monkeys and rats?

REEVES For the rest of this mission?

BERGMAN Uh umm.

REEVES Well, there's, I'm going to have to defer that to the Marshall people because that's related to their, the HRF belongs to them. And I can't answer in terms of the supply of food for the animals and all that.

PAO Carlos.

CARLOS BYARS (HOUSTON CHRONICLE) There's a number of animal type related questions that I need to ask but I think we'll probably have to - -

PAO - - specifically into the payload things, we'll have to - -

BYARS - - How about the, Overmeyer's still fussing with the drinking water system on the galley. Is that finally been sorted out or are they still having problems?



REEVES No, that appears to be a intermittent problem. The galley has a water dispenser on it where you put the little packages, the little containers, water containers into a rack and then you shove it in and the needle that the water comes out penetrates the receptable. And at the same time, the package trips a little microswitch that enables the shut-off valve and the water system to dispense the water, whatever volume of water you have selected and whether you want hot or cold water. And evidently, the problem appears to be in that microswitch because the crew can get to that, it's really visible. There's a little lever right in front and they have flipped the little switch and periodically, they get it back. But in the interim when they don't have that system, there's a simple IFM where they just hook up a hose and bypass the galley system and put a normal water gun on. So, they still have plenty of water available.

BYARS Is that something that perhaps, is there a manual override or anything on the microswitch?

REEVES No, there isn't. The manual override is to go to the water gun.

PAO Dan Molina, NBC.

DAN MOLINA (NBC NEWS) Well, you answered one of the questions that I had, the water problem isn't interfering with the normal cycle - -?

REEVES Oh no, in fact, on this, late in this last shift, you heard Overmeyer come back and say that it's not a big deal anyway that they have plenty of water.

MOLINA Alright Bill. The other question I had was, is there any update on the thinking as to whether you'll attempt to, you'll make a second attempt to deploy the other satellite?

REEVES To my knowledge, there is none at this point. There is an opportunity late in the mission, on the last day before entry but at this point and time, I personally have heard no discussion of a deployment.

MOLINA No discussion of trying to do that.

REEVES No.

PAO Okay, Paul Recer.

PAUL RECER (ASSOCIATED PRESS) Two questions, have you abandoned any attempt to fix the urine monitoring system?

REEVES There again, that is a payload system, an experiment system and it is being worked by the engineers who



built the thing. It is not being used at this time. It's, the problem is unknown at this point and there is no work around it at this point.

RECER Okay and secondly, when they hook up this auxilliary water gun, does that deliver water of selected temperature or is that only chilled water? And if it is only chilled water, how do they heat their food?

REEVES It's only chilled water but they can take the water, they can collect the water in a water container and then just put it in the oven and heat it up. So, you can get hot water that way.

RECER Okay.

PAO Dave Dooling back over here.

DAVE DOOLING (HUNTSVILLE TIMES) Earlier when the Shuttle passed through the Aurora arc, the call was made to Don Lind to watch out for enhancement of Shuttle glow or other effects. He apparently was too busy to look out the window. Did the rest of the crew report any effects or did you notice any slight charging effects or anything on telemetry?

REEVES I heard of no effects on any systems within the Orbiter or you know, any feedback from that discussion. I just briefly heard a discussion, I wasn't listening to that loop at that time but I heard them talking about it.

PAO Jim Asker, you had your hand up here.

JIM ASKER (HOUSTON POST) Back on GLOMR for a second, what's the latest thinking on why it didn't deploy and what would you say to someone who says, what's the trouble? NASA keeps taking these satellites up there and they don't go out. Do you need to do something to assure that you're taking better hardware into space?

REEVES Well, I'll answer your second question first. Number one, I think we've got a pretty good record of deploying satellites. It's a pretty harsh statement. But the best guess on the problem that I've heard to date is that it was a microswitch on the lid of the canister which has inhibited the deployment mechanism.

ASKER Okay.

PAO That gentleman right back here.

REEVES No, it's not better.



DICK LYONS (NEW YORK TIMES) About the Aurora again, Michael Lampton, after the exchange about the Aurora said in an interview that was put up on this screen but that there was a so-called drapery affect, the, several, one or more members of the crew reported after the Aurora episode that they had seen "drapery" and that this is a phenomenon that had been theorized x-years ago. If and when a spacecraft had gone through an Aurora. Could you amplify on what was said about the drapery, please?

PAO Well, that's a payload-related, experiment-related question and for this particular briefing, we're trying to just . . . The only things that Bill really can address are the Orbiter systems and I'm afraid the payloads peoples were unable to come over at the present time and we'll try and get one of those at the earliest opportunity. Carlos Byars.

BYARS I'll go ahead and get two more Shuttle-type questions in right quick.

REEVES Okay.

BYARS First one ought to be easy, is the WCS working and I mean ex-urine collection system?

REEVES As far as I can tell, it is. We have had no comments to the contrary.

BYARS Okay. (Garble) talked about a possible extension, how are your expendables at this stage as far as allowing an extension of a day in addition to the normal 2 days you always keep in your hip pocket?

REEVES Well, we always, you know, want to keep in the hip pocket whatever consumables we can and at this point and time when I left console, we did not have another extension day. We are running ahead on consumables but we don't have an extension day yet.

BYARS You're running - -

REEVES We don't have the capability for an extension day.

BYARS You're a little bit ahead but not a day.

REEVES That's a true story.

PAO Okay and Dave Dooling.

DOOLING If you are reasonably sure that it is the microswitch on the lid, might you consider it a contingency EVA to have an astronaut just put a little extra pressure on the lids so it will depress the switch?



REEVES No, I don't believe we would consider that at this point and time because that's, you know, an EVA is a fairly major task and you take a pretty big hit in timeline to do the preflight on the suits and do the EVA and a post on EVA. And there's a lot of equipment involved and it just clutters up the middeck. And that's not a consideration at this point.

PAO Okay and the gentleman right back here.

MIKE KENNEDY (LA TIMES) The people on the Challenger seem to have been doing a great deal of troubleshooting. Do you notice any undue fatigue or stress at this point?

REEVES None at all, I think the crew's in a fantastic mood and is doing a fantastic job of keeping up with the timeline and keeping up with all the tasks they're scheduled to perform. And they've handled some of the troubleshooting, well all of the troubleshooting so far, excellently.

KENNEDY Are they on the timeline?

REEVES Pretty much so, yes. We're right on the schedule.

PAO Okay, Craig Covault and then Jules.

COVAULT The predicted jet firings out of the verniers per hour was about 50. How's it running in actuality?

REEVES I asked that question just before I came over here cause I knew somebody was going to ask it. I didn't ask for a specific number but quantitatively, we are firing a little less than what was predicted. This appears to be a fairly stable attitude and it's behaving itself very well. We're very pleased with it. And the prop consumables are, you know, we're real fat in prop consumables as a result.

PAO Okay, Jules.

BERGMAN Bill, I've heard that, well though the crew reported an APU #3 problem on, during the Ascent yesterday. I've heard there never was an APU #3 problem, that it was a gaging problem.

REEVES A gaging problem. I know, there is no, we are not carrying an APU problem at this point. And they did shut one down a little bit early because the temperature and I think what you're referring to is the controller failure. There's a, on a water boiler spray system that cools the lube wall down from the APU. And there are two controllers in each APU system and one of the controllers appeared to not be controlling and which causes the spray to come on and spray onto the lube wall lines and carry the heat away. And it didn't appear to come on at the right time



so they switched the B controller and it did its job just fine. Now that we're back on orbit, we switched back to A because we pick up a bunch of extra telemetry points that the A controller has, the B doesn't so that we got further insight into the system on orbit. And the only function that that controller has lost at this point is the, what triggers the spray and what - -

BERGMAN And you shut down APUs until reentry?

REEVES Oh yeah, we don't use the APUs on orbit except for the flight control system checkout toward the end of the flight, the day before Entry. And then we only use one APU for that. So - -

PAO Okay, Carlos.

BYARS One of, another little, apparently an intermittent problem of sorts was with the, one of the computers and I'm not sure whether this is in Spacelab or in Shuttle but apparently was affecting systems intermittently from both Shuttle and Spacelab. Could you tell, has that been resolved, is it still intermittent, is it still a problem. What's the status?

REEVES Ok, the problem you're referring to came up during Spacelab activation and it was a problem... You can call up certain displays on the CRTs from the Orbiter cabin that affect the modules, so for activation when there's nobody in there, you can call up those SPEC functions and you can perform duties and read parameters out from the module and it was in that system, that exchange of information, that there was a problem. And, they were getting, onboard, they were getting (garble) that didn't make sense and on the ground all the data was correct. Turns out that the problem has been identified and it is a simple two words, two data words within the software that are incorrectly coded and they have developed a software patch, or it's called a g memory read/write, rewrite to the memory, and that will probably perform tonight. Right now it's undergoing verification to make sure you're writing to the right addresses within the software and so they'll perform that tonight and correct all of that. What it'll do is it'll restore all of this onboard readout capability back to the crew.

PAO Ok, and Dave Dooling.

DOOLING One more whack at GLOMR. Might you tweak the downward firing thrusters with the lid open to try to get it to flap down and depress the switches. Is that a possibility?

REEVES I really don't think so because that is a drive mechanism on that door. It's not a free swinging door so I don't think action reaction force would do it.

DOOLING           Ok, but you're saying that a microswitch apparently...What I understood from what you said in the explanations I've heard earlier that when the door drove open, apparently the switch did not trip, the door perhaps did not go that final quarter inch when it was fully extended, so if you gave the Orbitwer a slight thrust upward, wouldn't that flap that lid just a little bit and possibly depress that switch.

REEVES           Well, but at that point in time the lid is already open, the lid is not up against the microswitch and it wouldn't hit the microswitch.

DOOLING           Ok, is the switch supposed to release when the lid comes, as soon as the lid...

REEVES           I believe, I believe...

DOOLING           ...fully extended.

REEVES           I believe that's the design of it but I'm not quite sure. I'd have to check that. I can get back to you on it.

DOOLING           Ok, I'd like to know.

REEVES           Ok,

PAO               No questions from other centers, I guess we'll call it over. Thank you.

END OF TAPE