

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
FACSIMILE TRANSMISSION

STATION NO. (If applicable)	MESSAGE NO. <b>421</b>	PAGES		DATE <b>2/28/72</b>
		TOTAL <b>6</b>	LEAD AND (No. of pages) <b>5</b>	

TO:

MSC, ATTN: DR. C. A. BERRY, IN CARE OF MR DICK JOHNSTON/Code DA

FROM:

NASA HQ, Code MM/WALTON L. JONES

REMARKS

U R G E N T

PLEASE CALL X3503 FOR PICKUP IMMEDIATELY

For: Dr. Berry who is visiting Mr. Johnston today at MSC

Communications Sec.

TO: **MM**

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1972 FEB 28 AM 9 35

1 magnetosphere and the belts in order to have enough of this type  
2 of cosmic radiation, if that is indeed the <sup>use</sup>case, as we feel it  
3 is at the present time. So, that is another factor. The fact  
4 that our people have not seen it if they haven't been out of  
5 earth orbit is a contributing factor to the feeling that it is  
6 indeed, cosmic radiation.

7 Mr. Winn. Doctor, I am sorry that I had three other  
8 committee meetings this morning, but I did have your statement.  
9 It was delivered to my office yesterday and I found it to be  
10 very, very thorough and very interesting. I think it was yester-  
11 day or the day before I read an article in the paper that Apollo  
12 16 crew is going to land on the moon, and they are a little  
13 impatient. They don't want to wait, they want to get out and  
14 go through their maneuvers and antics.

15 Do you think, from a health standpoint, that they ought to  
16 rest for a while before they go out there? You know what I'm  
17 talking about?

18 Dr. Berry. Yes, sir, I do, Mr. Winn.

19 We have looked fairly carefully at what is planned for the  
20 time line with Apollo 16, of course, since our experiences with  
21 the previous flights, and particularly with Apollo 15. We have  
22 relaxed that time line considerably. You remember on 15 there  
23 was a stand up <sup>EVA</sup> where they decompressed the spacecraft and did  
24 a survey of the area surrounding the <sup>spacecraft.</sup> survey. That was done prior  
25 to sleep on the first night. This has always been a problem for

us as to what the feeling of the crew is. <sup>concerning sleep</sup> Of course, it makes a difference whether you really get rest or not.

I think that there is such an air of excitement ~~about being~~ about landing on the moon, that it is very unrealistic to expect a crewman to land on the moon with maybe a very slight look outside the window of his spacecraft, to turn around and go to sleep, and to have that rest be really meaningful.

The day has been <sup>planned</sup> ~~set~~ in such a way that I think it is well within the capabilities of the crew, and it is a relaxed time line, certainly, from what we had on Apollo 15. We are going to watch that area very carefully during the actual flight time. We are going to be monitoring the crew for fatigue and we have done a great deal of talking with the crew about that area.

Mr. Winn. If anything would show up, I think all we want to do is reassure the people, because I didn't think the article was too complimentary of the details that you and the crew take. I'm afraid it made them sound like little boys going into a sand pile the first time, and all the members of the Committee realize that you are monitoring these crew members all the time.

If anything would show up that was not satisfactory to you, you are the boss, aren't you, from a health standpoint?

Dr. Berry. Yes, sir.

Mr. Winn. They don't make their own decisions?

Dr. Berry. No, sir. We have monitoring capabilities so that we can get information to them at any time. As you know,

1 we are monitoring what the metabolic cost of that activity is.  
2 If we had a feeling from the data available to us and from voice  
3 communications, television, all the means of obtaining informa-  
4 tion about the crew, ~~that, if we had some concern~~ <sup>there was cause for</sup> from a  
5 medical point of view, ~~that~~ <sup>neurological</sup> the crew ~~should indeed change~~ <sup>in</sup> ~~that~~  
6 flight plan activity or ~~they should stop~~ <sup>pin</sup> a certain activity  
7 and rest, that information would be passed to them, and that is  
8 exactly what would happen.

9 Winn. You can advise or order them to either rest, stop,  
10 change their time schedule if necessary because of health  
11 problems or questions that might show up, and until they are  
12 clarified in your mind, or tell them to go to sleep if you  
13 think that they are that fatigued?

14 Dr. Berry. Yes, sir. In fact, that is done where we  
15 monitor flight activities. And, there is a tendency, of course,  
16 when you are out on the lunar surface, doing a certain type of  
17 activity, <sup>to continue it to completion.</sup> you have to take into consideration what some of the  
18 operational constraints might be at that particular time. ~~that~~  
19 Depending upon exactly where the individual is and exactly what  
20 he is doing at that moment, you might not want him, for instance,  
21 to return all the way to the lunar module at that point in time  
22 or something of that sort. But, you certainly could stop that  
23 immediate activity if that appeared to be something that was  
24 creating undue metabolic loads.

25 Mr. Winn. Of course, we have a variation in reaction by the

42/  
individual astronaut. Some get a higher pulse and different things as we not<sup>e</sup> by the reports we get back from the men of the crews that have all ready landed on the moon.

Well, I just wanted you to clarify that, because I didn't think the press handled it too well, and I know how dedicated all of you are to the health of the astronaut. And, certainly, that is what the people of the world want as much as the television show.

Thank you.

Dr. Barry. You are very welcome.

Mr. Frey. Two questions, Doctor.

One, on this recycling where we are -- I think this is one of the real intriguing things. We are getting to the point now where we are going to be spending billions of dollars in the question of waste disposal, building secondary and <sup>tertiary</sup> ~~retrosiary~~ waste disposal plants over the next number of years. We don't know the exact figure right now but we do know it's going to be alot with alot more coming after it.

Of course, one of the things that I think intrigues some of us is the possibility of sometime getting what you have been working on in a small scale to the point where it can be adapted throughout this country. And, if for other thing, for the existence of the space program, if we can work this out in terms of pure, simple economics, in terms of what the space program has done, I think this one thing could justify everything we've done

8 Mr. Teague. No, sir.

2 Mr. Fuqua. The Chairman of the full committee has been  
3 here this morning.

4 Chairman Miller?

5 Chairman Miller. I am only sorry I couldn't have been here  
6 much longer, but I had a little conference and got back. I  
7 enjoyed very much the testimony and I am very happy to see my  
8 friend, Dr. Berry, down there. He looks pretty well after all  
9 these years of hard service. I welcome him.

10 Mr. Fuqua. Thank you very much, Mr. Culbertson. We  
11 appreciate you and Dr. Berry for being here this morning.

12 The next meeting of the Subcommittee will be at ten o'clock  
13 on March 1st. We will consider the construction of facilities  
14 and research program management.

15 The Committee will stand in recess.

16 (Whereupon, at 12:50 p. m., the Subcommittee adjourned  
17 until Wednesday, March 1, 1972.)

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