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In reply refer to: DA-1(GML:bs)

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MEMORANDUM For the Associate Administrator

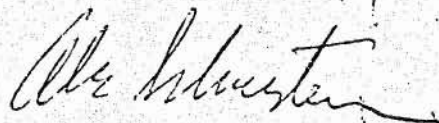
Subject: Artificial Gravity Considerations for Project Apollo

Reference: Memorandum, Randt to Seamans, von Braun, Donlon,
and Gilruth, October 21, 1960

1. The reference memorandum is based on the premise that "the first phases of the Space Task Group in-house study of the Apollo system will not consider the engineering aspects of providing an artificial gravity environment for the crew." It is true that Space Task Group has no major in-house studies considering the engineering aspects of providing artificial gravity. However, we have recognized this problem as an unknown for quite some time, as was pointed out in the Industry Conference on July 29 (page 84).

2. As you know, we recently selected three contractors to perform detailed engineering studies of the Apollo system. Each of these contractors is expected to investigate, as a part of these studies, the conceptual approaches to providing an artificial gravity field. In the work statement, the contractors were directed to study systems for providing artificial gravity on a parametric basis (range of g from zero to one, over a range of rotational speeds).

3. I believe that it is too early to specify that the Apollo spacecraft should be capable of providing artificial g . Instead, such a specification should be made, if required, at the time a hardware contract is definitized; by that time a decision can be made on a more rational basis, as a result of Mercury experience and of the trade-off studies mentioned above.



Abe Silverstein

Director of Space Flight Programs

cc: S/Randt
Dr. Goett, GSFC
Mr. Gilruth, LRC/STG