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MEMORANDUM

Lyndon B. Johnson Space Center NASA

REFER TO:	DATE	INITIATOR	ENCL
SA	March 7, 1983	SA:JCStonesifer:cdd:3-8-83	1

TO: Distribution

CC

FROM: SA/John C. Stonesifer

SIGNATURE John Stonesifer
John C. Stonesifer (x 5305)

SUBJ: STS-8 DSO Information

The MICB (Mission Integration Control Board) met on March 2, 1983, to review the STS-8 flight requirements. Included in this review was the attached Life Sciences candidate list of DTO's and DSO's. Note that Numbers 1-17 had been approved previously for STS-7 and include some which have been conducted on earlier flights. Numbers 18-26 are new.

Following a familiarization briefing plus questions and answers about the candidate list, the Board approved all the DTO's/DSO's with the exception of Numbers 24 and 26. These two were withdrawn for lack of information for the Board to review.

I will use the information presented at the MICB to prepare the DSO formats for the STS program documentation. Prior to submitting the information for publication in these documents I will review it with each DSO sponsor. It is the sponsor's responsibility to coordinate with the proper individuals to assure that the associated training is arranged and that the necessary procedures appear in the crew activity plan.

At the present time there appears to be a small performance margin for STS-8; therefore, some items that were approved (medical DSO's and others) at this MICB may be deleted later to reduce total vehicle/payload weight.

In addition to the listed DSO's another DSO, "Verification of the Animal Enclosure Module" was tentatively approved for STS-8. This DSO is the forerunner to the student experiment involving arthritic rats. The DSO will be presented to a MICB for formal approval as soon as a complete information package is assembled and distributed to the MICB members. Dr. Malcolm Smith and I are preparing this information and should be able to meet the MICB schedule (meeting March 17 or 18).

Distribution:

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SE5/F. R. Spross

LIST PRESENTED TO MICB 3/2/83

LIFE SCIENCES CANDIDATE LIST OF DTO'S/DSO'S FOR STS-8

1. CABIN ATMOSPHERE VERIFICATION (DTO 0602)
2. VALIDATION OF PREDICTIVE TESTS AND COUNTERMEASURES FOR SPACE MOTION SICKNESS (DSO 0401)
3. CARDIOVASCULAR DECONDITIONING COUNTERMEASURE ASSESSMENT (DSO 0402)
4. HEAD AND EYE MOTION- ASCENT AND ENTRY (DSO 0403)
5. ON ORBIT HEAD AND EYE TRACKING TASKS (DSO 0404)
6. ACCELERATION DETECTION SENSITIVITY (DSO 0405)
7. KINESTHETIC ABILITY (DSO 0406)
8. BODY FLUID SHIFT STUDY - STOCKING PLETHYSMOGRAPHY (DSO 0407 - STS-5) OR PHOTO DOCUMENTATION
9. NEAR VISION ACUITY (DSO 0408)
10. MICROBIOLOGY SCREENING TESTS (DSO 0409)
11. AUDIOMETRY (DSO 0410)
12. TREADMILL PHOTOGRAPHY (DSO 0412)
13. TISSUE PRESSURE - TONOMETER (DSO 0415)
14. OPTHALMOSCOPY (DSO 0414)
15. AMBULATORY MONITORING WITH/WITHOUT SKELETAL LOADING AND OTHER MANEUVERS (DSO 0416)
16. INFLIGHT COUNTERMEASURES FOR SPACE ADAPTATION SYNDROME WITH OBJECTIVE MEASUREMENTS (DSO 0417)
17. EYE - HAND COORDINATION (DSO 0418)

NOTE: NUMBERS 1 THROUGH 17 ARE APPROVED FOR STS-7. SOME HAVE BEEN PERFORMED ON EARLIER FLIGHTS. IN ADDITION TO THE 17 ABOVE, DSO 0413, "TEST OF CELL ATTACHMENT IN MICROGRAVITY" COMPLETES THE LIST FOR STS-7.

Life Sciences Candidate List of DTO's/DSO's for STS-8 (Continued)

18. ANATOMICAL OBSERVATION (THORNTON)
19. STUDY OF INFLIGHT FLUID CHANGES (THORNTON/LEACH)
20. EVOKED POTENTIALS DEMONSTRATION (THORNTON)
21. INTRAOCULAR PRESSURE (POOL)
22. DENITROGENATION PROCEDURES VALIDATION (WALIGORA/HORRIGAN)
23. BODY WEIGHT/MASS (DSO 0411) (THORNTON)
24. PHARMOKINETICS (LEACH/JOHNSON)
25. SOFT CONTACT LENS APPLICATION TEST (THORNTON/YOUNG)
26. MEASUREMENT OF CARDIAC SIZE AND OUTPUT IN MICROGRAVITY [USING ECHOCARDIOGRAPHY] (BUNGO)

Life Sciences Candidate List of DTO's/DSO's for STS-8 (continued)

18. ANATOMICAL OBSERVATION (THORNTON)
19. STUDY OF INFLIGHT FLUID CHANGES (THORNTON/LEACH)
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Dr Thornton,

These are the procedures for STS-7. Above is an additional list of DSO's possibly being flown on STS-8. We need procedures for the above DSO's to print by April 6th. Could you please review and provide some inputs to me.

Thanks,

Steve McCree X 2541
Room 234

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MEMORANDUM

Lyndon B. Johnson Space Center

NASA

REFER TO: CB	DATE June 26, 1984	INITIATOR CB/WEThornton:ms:6/26/84:3721	ENCL

TO: SA/Director, Space and Life Sciences

CC
SA2/J. C. Stonesifer
SD2/J. Vanderploeg

FROM: CB/W. E. Thornton, M.D.

SIGNATURE
William E. Thornton,M.D.

SUBJ: STS-8 DSO Reports

Verbal presentations were prepared for all "my" DSO's on STS-8, and completion of the presentations can be made at your convenience (when I am in town). Work continues on definitive reports but the material is massive, too massive for my frantic efforts without support in the immediate future. As discussed, there is an almost complete M/S on the AEP's and some aspects of the EOG's which will be shown to you shortly, and a summary M/S is in work for Aerospace Med.

A number of other individual DSO's have been written up, but there has never been a decision on how and where to publish these, only the incessant clamor that, "Thornton hasn't shown us his results." The latter is in the face of several briefings at Washington and elsewhere and innumerable smaller briefings locally within a few weeks of the flight. These contained a summary of the pertinent findings after an abbreviated but intense study of all data. There were also formal DSO reports to the Project Office.

This is in contrast to apparent total absence of reports to date from SL-1. A summary of the MSFC SL-1 reports is out, but the L/S studies are conspicuously absent. Also, one might contrast both the scope and level of support for these efforts.

I will continue to give the reports priority, even over badly needed continuation of crucial in-flight work.