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14 August 1973

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Earth Observations Division
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Subject: Contract NAS9-13304 Monthly Progress Report for the Period of 1 July - 31 July, 1973.

General

Efforts this period have been devoted to obtaining "quick-look" data from SL-2, planning for SL-3 and continuing with the development of mathematical models for processing of S-193 radar altimeter data.

Problem Areas

No significant problem areas were encountered this period.

Investigation Results

An analysis of ten (10) seconds of Mode I altitude data from EREP Pass four resulted in a standard deviation of about 7.5 nanoseconds for the altimeter output. This standard deviation of the altitude data translates into approximately 12 nanoseconds jitter in the tracker loop which compares favorably with GE's breadboard test results. The 12 nanosecond jitter standard deviation indicates that realignment of the Sample and Hold gates will not be necessary when determining the mean return pulse. A "quick-look" at the mean return pulse shape from EREP pass four, Mode I indicates an antenna pointing angle of 0.5 to 0.7 degrees off nadir.

Initial data processing algorithms were passed to NASA-Wallops Station personnel for computer programming.

Next Period Efforts

We will continue to reduce the available "quick-look" data in order to determine their impact on processing models we are currently developing. Major efforts which remain are waveform reconstruction and σ^0 determination.

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(E73-10917) [ACQUISITION OF QUICK-LOOK

DATA FROM SL-2] Monthly Progress

Report, 1-31 Jul. 1973 (Research Triangle

Inst.) 2 p HC \$3.00

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Travel Summary and Plans

On 17-19 July, Dr. Brown traveled to Houston (NASA-JSC) to obtain "quick-look" data from SL-2. On 25-27 July, Dr. Brown traveled to Wallops Island (NASA-WS) to coordinate data processing efforts and to participate in the S-193 planning for SL-3.

No trips are scheduled for the next period.

Financial Management Report

A financial report for this period is included as Appendix A.

for Gay S Brown, Co-Investigator
Lee S. Miller, Ph.D.
Principal Investigator

LSM/dc