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E82-10045
CR-164922

FOURTH QUARTERLY REPORT
FOR
MAGSAT SCIENCE INVESTIGATIONS

Contract NAS 5-26328

For the period

6/1/81 - 8/30/81

submitted to

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

by

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(E82-10045) MAGSAT SCIENCE INVESTIGATIONS
Quarterly Report, 1 Jun. - 30 Aug. 1981
(Business and Technological Systems, Inc.)
4 p HC A02/HF A01 CSCI 08G

1.0 WORK ACCOMPLISHED DURING REPORT PERIOD

Mayhew traveled to Edinburgh to the IAGA meetings, presented a paper on the Magsat anomaly studies to date, chaired the evening Magsat session, and participated in the Magsat investigators meetings.

The BTS group plans to submit several manuscripts for Langel's special issue of Geophysical Research Letters. Included will be papers on 1) magnetization modeling results for several parts of the world, 2) Magsat anomaly data set characteristics and the problem of modeling magnetization directions, and 3) large-scale crustal magnetization (with Wasilewski).

During this period we have determined the optimal source spacing for the computed delta-B data set from the intermediate attitude tapes, and are preparing a new U.S. magnetization map based on this result.

Computed delta-B from the fine-attitude tapes has been found to be unexpectedly noisy; the reason for this is being sought.

2.0 WORK PLANNED FOR NEXT REPORTING PERIOD

1. Complete study of source direction modeling and prepare manuscript.
2. Resolve question of excessive noise in fine-attitude delta-B.
3. Produce new U.S. magnetization map.
4. Produce magnetization maps of other regions and prepare manuscript.
5. Complete crustal magnetization review.

3.0 FISCAL AND PLANNING DATA

Contract Price	\$89,685.00
Prior Expenditure	52,197.00
Expenditure this Quarter	14,002.00
Total Expenditure to Date	66,199.00
Amount Remaining	23,486.00
Total Hours Expended	1,845
Amount Next Quarter (Estimate)	13,500.00
Amount Required to Complete Work	23,486.00