

E82-10307

CR-168882

*Made available under NASA sponsorship
in the interest of earth and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made therefrom.



North Carolina State University
School of Physical and Mathematical Sciences

Department of Marine, Earth and Atmospheric Sciences
(919) 737-2210

Box 5068, Raleigh 27650

February 1, 1982

Mr. Harold Oseroff
NASA Goddard Space Flight Center
Greenbelt, MD 20770

Subject: Progress Report NAS5-26157 covering the six month period ending
January 31, 1982

Dear Harold:

As I had informed you in my last progress report, I spent the 1981 fall semester at the Earthquake Research Institute of the University of Tokyo, mainly with Dr. Takesi Yukutake, a member of the Japanese nationwide MAGSAT consortium. During the stay, I was privileged to give several talks at both the University of Tokyo and a Japanese MAGSAT Convention in Sendai in late November 1981 on our MAGSAT project along with other subject of my research.

Presently, our efforts on the analysis of the MAGSAT data are centered on the following subjects

- i) Analysis of MAGSAT scalar anomaly data in the eastern U.S.: We have obtained a preliminary scalar anomaly map of the area using the MAGSAT data up to mid-March, 1980. Since there exist predominant east-west striping anomalies, which may be caused artificially by removing a low-order polynomial for each pass to correct the orbital bias errors, we plan to attempt to remove the east-west anomalies through either removing a low order polynomial surface in a least-squares sense or through a two-dimensional spectral filtering scheme.
- ii) Application of the above analysis to the three-component vector data, and,
- iii) Analytic comparison between the resultant scalar and vector anomaly data with corresponding MAGNET aeromagnetic data as well as the free-air gravity anomaly data.

Most of necessary computer programs to process, analyze, and display the MAGSAT data have been completed. Upon receipt of the final Investigator B tape covering up to mid-May, we plan to proceed with the analysis of the entire MAGSAT data. The results of the investigation will be reported in the forthcoming progress report.

RECEIVED

FEB 19, 1982

SIS/902.6

M-008

Sincerely yours,

I. J. Won
Associate Professor of Geophysics

IJW/ba

North Carolina State University is a constituent institution of The University of North Carolina.

TYPE II

N82-24581

Unclas
00307
G3/43

(E82-10307) [MAGSAT SCALAR AND VECTOR
ANOMALY DATA ANALYSIS] Progress Report,
period ending 31 Jan. 1982 (North Carolina
State Univ.) 1 p HC A02/MF A01 CSCI 08B

Faint, illegible text at the top right of the page, possibly bleed-through from the reverse side.



Faint, illegible text or markings in the bottom right area of the page.