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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 artifically 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.



Sincerely yours,

I. J. Won
Associate Professor of Geophysics

IJW/ba