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PROGRESS REPORT ON MAGSAT INVESTIGATION

by

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A computer program has been prepared for modelling segments of the earth's crust allowing for heterogeneity in magnetization in calculating the earth's field at MAGSAT heights. This is designed to allow us to investigate a large number of possible models in assessing the magnetic signatures of sub-provinces of the Canadian shield, particularly across the Archean-Proterozoic boundary on the western Canadian shield. The fit between the model field and observed fields is optimized in a semi-automatic procedure. This will allow us considerable flexibility in considering a variety of evolutionary models for the earth's crust. We have received the preliminary data set from MAGSAT and are adjusting our software to handle the formats, etc. for those tapes. We have perfected most of our ancillary software such as continuation and other field operations so as to be suitable for data at satellite heights. I have secured the continuation of the position of the interpreter-programmer who has been trained for the project. We are awaiting the investigators' tapes so that we can continue with our investigation of the MAGSAT characteristics of the Canadian shield.