THE CARTOGRAPHIC APPLICATION OF ERTS/RBV IMAGERY IN POLAR REGIONS

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1 January 1973

Type II Progress Report for Period 1 July 1972 - 31 December 1972

Prepared for:

Goddard Space Flight Center
Greenbelt, Maryland  20771

Publication authorized by the Director, U.S. Geological Survey
Abstract

No cartographic products have been compiled with regard to this proposal over the polar regions.

RBV or MSS is non-existent over the antarctic region. Widely scattered MSS imagery over the arctic region precludes compilation of any one cartographic product.

The field tests for experiment #8, "Doppler Position System," were completed as outlined under the subject proposal. Results from the field tests indicate that doppler satellite surveying methods can be utilized to establish mapping control in Antarctica. The remaining task of this experiment is to analyze ERTS imagery over the doppler field test areas with regard to photoidentification of the doppler positions established during the field test. It is anticipated that the results will prove the feasibility of using doppler satellite equipment for positioning and to meet the precision processing requirements of ERTS imagery in Polar and other remote areas.

Key Words (Selected by Author(s))

Polar cartography
Glaciology
Sea Ice
Nunataks
Shelf ice

Distribution Statement

Figure 2. Technical Report Standard Title Page
Type II Progress Report
ERTS-A

a. Title: The Cartographic Application of ERTS/RBV Imagery in Polar Regions

ERTS-A Proposal No.: SR 149

b. GSFC ID No. of P.I.: IN 391

c. Statement and explanation of any problems that are impeding the progress of the investigation:

There are eight different experiments proposed under this proposal; six in the Antarctica area, and two in the arctic region. Although no RBV or MSS imagery has been received over Antarctica, widely scattered imagery continues to be received over the arctic region.

Preparation for a physical move of office facilities from Maryland to Virginia has resulted in some delays with regard to our indexing and evaluation of ERTS imagery over the arctic region. The new office facilities should be fully operational the first part of January 1973.

The most single impeding factor has been the lack of ERTS imagery over the antarctic region.

d. Discussion of the accomplishments during the reporting period and those planned for the next reporting period:

Plans are being formulated to devise a more suitable indexing method for the total volume of film and prints of the MSS imagery being received covering the arctic area and for the anticipated volume of data that will be received from the Antarctica.

Plans are to index the continuing flow of newly received imagery and to initiate work on proposed experiments as soon as MSS imagery becomes available. If imagery becomes available over the antarctic region, production efforts will be directed toward those experiments that would be most beneficial to this year's U.S. Antarctic Research Program efforts.

e. Discussion of significant scientific results and their relationship to practical applications or operational problems including estimates of the cost benefits of any significant results. N/A
f. A listing of published articles, and/or papers, preprints, in-house reports, abstracts of talks, that were released during the reporting period: N/A

g. Recommendation concerning practical changes in operations, additional investigative effort, correlation of effort and/or results as related to a maximum utilization of the ERTS system: N/A

h. A listing by date of any changes in Standing Order Forms: N/A

i. ERTS Image Descriptor forms: N/A

j. Listing by date of any changed Data Request forms submitted to Goddard Space Flight Center/NDPF during the reporting period: N/A