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## Land Use Studies with Skylab S-192 Data

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LAND USE STUDIES WITH SKYLAB S-192 DATA

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- (1) Spectral bands (number, widths, and location),
- (2) Sensitivity,
- (3) Spatial resolution,
- (4) Temporal coverage

The significant results obtained in this work will be presented.

ABSTRACT

The work discussed in this paper uses SKYLAB S-192 digital tapes for the SL/3 Mission over the Washington, D.C.-Baltimore, Maryland urban areas and nearby rural areas in Virginia and Maryland.

The questions addressed were as follows:

- \* To what degree does the increased spectral coverage of the SKYLAB S-192 Multispectral Scanner (0.41 microns - 12.5 microns) provide new and important information not currently available with the LANDSAT I and II MSS?
- \* What are the optimal spectral bands to be used in discriminating various land use categories? How do the optimal spectral bands vary from category to category?
- \* What accuracy levels are achievable when performing multi-spectral classification using SKYLAB-S-192 data? Do these accuracy levels meet the needs of the land use planner?
- \* How do the classes of data which are spectrally discriminable by the S-192 Multispectral Scanner relate to the land use categories of value to the land use planner? It should be noted that this question was assessed through use of a clustering algorithm. Since such algorithms cluster the actual data, fully quantitative analysis would be misleading since the composition within the clusters is influenced by the number of items in the sample as well as the clustering routine and thresholds employed. Consequently, the clustering is a general guide, not a fully quantitative assessment procedure.
- \* What impact does this study have on future space systems with regard to: