

Reprinted from

**Tenth International Symposium**

**Machine Processing of**

**Remotely Sensed Data**

with special emphasis on

**Thematic Mapper Data and**

**Geographic Information Systems**

**June 12 - 14, 1984**

**Proceedings**

Purdue University  
The Laboratory for Applications of Remote Sensing  
West Lafayette, Indiana 47907 USA

Copyright © 1984

by Purdue Research Foundation, West Lafayette, Indiana 47907. All Rights Reserved.

This paper is provided for personal educational use only,  
under permission from Purdue Research Foundation.

Purdue Research Foundation

COMPARISON BETWEEN MULTISPECTRAL CLASSIFICATION  
ACCURACY OF LANDSAT-4 MSS AND TM IN HARTFORD,  
CT AND MIAMI, FL

S.L. ADAMS, R.G. MCLEOD

Jet Propulsion Laboratory  
California Institute of Technology  
Pasadena, California

(Manuscript not available at time of  
printing.)

ABSTRACT

Improvements in the capability to map and integrate remotely sensed data into land resources data bases are being pursued. Current activity focuses on development of procedures and software that integrate remotely sensed data and additional collateral data into models that assess potential land capability under various land use constraints. Land use and land cover for Hartford, CT and Miami, FL were manually interpreted from large scale aerial photographs, digitized and reprojected to the UTM map projection. Landsat-4 Thematic Mapper (TM) and multispectral scanner (MSS) imagery were coregistered with the digital land cover/land use maps.

The land cover information for the imagery represented 37 distinct classes. These classes were aggregated to levels I and II of the USGS land cover/land use classification system and used as stratifiers in classifying the TM and MSS imagery. The digital land use files also afforded calibration of the final classification outputs. Performance characteristics of the TM imagery for representing land cover/land use levels are summarized and contrasted with the MSS imagery.