Pecora VIII

National Aeronautics and
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NSTL Station, Mississippi 39529

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Reply to Attn of HA30

July 7, 1983

Dr. Allen H. Watkins
Chief, EROS Data Center
Geological Survey
Sioux Falls, SD 57198

Dear Dr. Watkins:

Enclosed is a final title and short abstract of a paper addressing forest inventory techniques using the Landsat-4 Thematic Mapper.

I am looking forward to the Pecora VIII Symposium and await additional paper guidelines and schedules.

Thank you for your invitation.

Sincerely,

C. L. Hill
Earth Resources Laboratory

Enclosure

ANALYSIS OF LANDSAT-4 THEMATIC MAPPER DATA FOR CLASSIFICATION OF FOREST IN BALDWIN COUNTY, ALABAMA

C. L. Hill
National Space Technology Laboratories
NASA/Earth Resources Laboratory
Code HA30
NSTL, MS 39529

ABSTRACT

The improvements in spatial and spectral resolution of Landsat-4 thematic mapper (TM) data over previous multispectral scanner (MSS) data have significantly expanded the utility of satellite-acquired remotely sensed data in the field of forest resource management. Because of the diversity and interspersion of vegetative communities in the forest, the 30-meter spot size of the TM offers an opportunity to differentiate forest stands. In addition, the thematic mapper provides a sample of a portion of the electromagnetic spectrum not routinely available in the past. These TM attributes will be extremely useful in identifying and delineating the various vegetative communities and timber stands composing the forest.

As part of NASA's Test and Evaluation Program, the NASA Earth Resources Laboratory has initiated a research effort to analyze TM data for contribution in the field of forest management. Baldwin County, Alabama, has been established as the study area. A major portion of the county is managed by various products companies with management policies ranging from monoculture plantations to mixed uneven-aged timber stands. These characteristics present a unique opportunity for assessing the capabilities of TM data for forest classification.

Since TM data for the study area have just recently been acquired, the results presented here are initial in scope and represent an early effort in the evaluation of TM data in forest management.