

**SATELLITE LAND
REMOTE SENSING
ADVANCEMENTS
FOR THE
EIGHTIES**

Updated Program

**Pecora
VIII**

The Eighth William T. Pecora Memorial
Remote Sensing Symposium

Sponsored by:
The National Aeronautics and
Space Administration
The National Oceanic and
Atmospheric Administration
The United States Geological Survey

**October 4-7, 1983
Sioux Falls, South Dakota**

Attend Pecora VIII to get the latest factual information on:

-Transfer of U.S. remote sensing satellites to industry.

-Current Administration policy and Congressional views.

-The French plans for acquiring and distributing SPOT data.

-Other International Satellite Plans.

-Landsat 4 TM results and plans.

Pecora VIII shifts emphasis from the applications of remote sensing data, the overall theme of previous symposia in this series, to an overview of U.S. and international plans and policy for satellite land remote sensing for the future. Pecora VIII will provide definitive information on domestic and foreign satellite plans for the eighties.

The Pecora Symposium was established in 1975 to foster the exchange of scientific and resource management findings resulting from the use of remotely sensed data. The symposium series honors the memory of William T. Pecora, former Director of the U.S. Geological Survey and Undersecretary, Department of the Interior. Dr. Pecora played a major role in the development and establishment of this country's satellite remote sensing systems.

Updated Program

TUESDAY, OCTOBER 4, 1983

8:30-9:30 Registration

9:30-12:00 Welcome and Symposium Overview

Allen H. Watkins, Chief
USGS/EROS Data Center

NASA Land Remote Sensing Plans for the 1980's

B.I. Edelson
Associate Administrator for Space Science and Applications

NOAA Land Remote Sensing Plans and Policy

John M. McElroy
Acting Assistant Administrator for National Environmental Satellite Data and Information Services

Geological Survey Land Remote Sensing Activities

Doyle Frederick
Associate Director
U.S. Geological Survey

Source Evaluation Board for Civil Space Remote Sensing: Background and Current Status

Larry E. Heacock
Secretary
Source Evaluation Board

Noon-1:30

Luncheon and Keynote Address by key administration spokesman on U.S. Satellite Remote Sensing Policy in the 1980's

1:30-4:30

Invited Papers on Landsat 4 Results

Chair: Vincent Salomonson, Chief, Earth Survey Applications Division NASA/Goddard Space Flight Center

The Evolution and Present Status of the Landsat 4 System

Vincent Salomonson

Data Products and Processing Procedures

John Lyons, Interpretive Techniques Branch
NASA/Goddard Space Flight Center

Thematic Mapper Image Processing System (TIPS) Performance

Eric P. Beyer, General Electric Company
Valley Forge Space Center

Landsat 4 Sensor Performance

John Barker, Earth Resources Branch
NASA/Goddard Space Flight Center

Thematic Mapper—Detailed Radiometric and Geometric Characteristics

Hugh Kieffer, U.S. Geological Survey
Flagstaff, Arizona

Landsat 4 Thematic Mapper Sensor Evaluation and Advanced Information Extraction Experiments

Ralph Bernstein and Jeffery B. Lotspiech,
IBM Palo Alto Scientific Center

Radiometric Analyses of Landsat 4 Digital Image Data

William Malila, Daniel Rice, and Michael Metzler, Environmental Research Institute of Michigan

Landsat 4 Quality Evaluation Results

P.E. Anuta, L.A. Bartolucci, M.E. Dean, C.D. McGillem, and E. Malaret, Laboratory for Applications of Remote Sensing
Purdue University

6:00-8:00 Cocktails and Hors d' oeuvres

A two-hour socializer for registrants to enjoy refreshments and make acquaintances. Two cocktail vouchers and hors d' oeuvres are included with registration. Cash bar available. Ramada Inn.

WEDNESDAY, OCTOBER 5, 1983

9:00-12:00

Invited Papers on Landsat 4 Results

Chair: Vincent Salomonson

Cartographic Quality of Landsat 4 MSS and TM Image Data

R. Welch, Department of Geography
University of Georgia

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

Evaluation of Thematic Mapper Data for Natural Resource Assessment

Robert Haas and Fred Waltz,
Technicolor Government Services, Inc.

Agricultural Applications of TM Data

David E. Pitts, R. Bizzell, K. Henderson, and D.R. Thompson, NASA/Johnson Space Center and C. Sorenson and J. Carnes, Lockheed Engineering and Management Corporation

Evaluation of Landsat 4 Image Quality for the Interpretation of Forest, Agricultural, and Soil Resources

Stephen D. De Gloria, Remote Sensing Research Program, University of California

TM Data Enhancement and Geological Findings

John Everett, Earth Satellite Corporation

Lithologic Mapping Using Landsat Thematic Mapper Data

M.H. Podwysocki, J.W. Salisbury, O.D. Jones, and D.L. Mimms, U.S. Geological Survey

Noon

Luncheon Break

1:30-5:30

Applications and Related Technology

Chair: Donald T. Lauer, Chief

Branch of Technique Development and Applications
USGS/EROS Data Center

Geologic Applications of Side-Looking Airborne Radar Data in the Central Appalachians

Howard A. Pohn, U.S. Geological Survey

The National Digital Cartographic Data Base

Eric Anderson, U.S. Geological Survey

The National High-Altitude Photography Program

Peter Bermel, U.S. Geological Survey

Application of Metsat Data in Land Remote Sensing

George Ohring, NOAA/National Environmental Satellite Data and Information Services

The Emerging Analytical Capabilities of Microcomputers

William Erickson, NASA/Ames Research Center

New Opportunities for the Private Sector in Remote Sensing

Doug Carter, Remote Sensing Consultant in Geology

THURSDAY, OCTOBER 6, 1983

9:00-12:00

Future Operational Satellites: Plans and Status

Chair: Pitt G. Thome, President
The Destek Group

The Advanced Earth Resources Observations Satellite (AEROS), a Private Sector Remote Sensing Space System

N.H. MacLeod, American Science and Technology Corporation

COMSAT's Current Plan for Land Remote Sensing Systems

Paul Maughan, COMSAT General Corporation

The Fairchild Leascraft Project

John Naugle, Fairchild Space and Electronics Company

The GEOSAT Committee's Current Activities and Plans

Fred Henderson, GEOSAT Committee

The Large Format Camera

Fred Doyle, U.S. Geological Survey

**Noon
1:30-5:00**

GEO-SPAS, A New Approach for Commercialization of Remote Sensing

G. Barthel, Hans-Christian Benohr, and B.E. Koelle, MBB Space Division, Federal Republic of Germany

RADARSAT

Ed Langham, Radarsat Project Office, Canada

Mapsat

Alden Colvocoresses, U.S. Geological Survey

Multilinear Array Instrument Concepts for Future Land Remote Sensing

Aram Mika, Hughes Aircraft Company

Luncheon Break

Future Operational Satellites: The French SPOT Program

Chair: Gilbert Weill, Director
SPOT Image Corporation, U.S.A.

SPOT System Conception and Program Status

Michel Courtois, Centre Spatial De Toulouse

Flexible Programming for SPOT System

M. Cabrieres

Integration of Oblique Space Imagery into Geographic Data Bases

M. Denegre

Worldwide Distribution Plans

A. Fontanel, CNES/SPOT Image, France

Testing and Applications Using Simulated Imagery

G. Saint, CNES/Toulouse

The GDTA SPOT Simulation Program

J.C. Cazaux, CNES/Toulouse

The 1983 U.S. SPOT Simulation Campaign

G. Weill, SPOT Image

7:00

Pecora Award Banquet and Address

By Senator Larry Pressler,
Senate Commerce, Science, and Transportation Committee

(Schedule continued on reverse side)

**REGISTRATION
PECORA VIII SYMPOSIUM
SATELLITE LAND REMOTE SENSING ADVANCEMENTS FOR THE EIGHTIES
OCTOBER 4-7, 1983**

Name _____ Title _____
Organization _____ Phone _____
Address _____ Zip Code _____
_____ Pre-registration (\$95.00) _____ Spouse (\$40.00) _____ Student (\$20.00) _____
(Includes Luncheon, Socializer, and Banquet) (Does not include Luncheon, Socializer, or Banquet)

Make checks payable to Pecora VIII Symposium and mail to:
Pecora VIII, P.O. Box 80937, Sioux Falls, S.D. 57116.

The Award Banquet will also feature the 1983 winner of the Willian T. Pecora Award, given each year in recognition of outstanding contributions of individuals or groups toward the understanding of the Earth by means of remote sensing. Dinner is included in the registration fee. Ramada Inn.

FRIDAY, OCTOBER 7, 1983

9:00-12:00 Future Space Shuttle Experiments

Chair: Mark Settle, Landsat 4 Program Scientist, NASA Office of Space Science and Applications

Optical and Biological Land Cover Using a Shuttle-Mounted Multilinear Array Radiometer

Vincent Salomonson, NASA/Goddard Space Flight Center

Shuttle Imaging Spectrometer

Alexander Goetz, Jet Propulsion Laboratory

Multispectral Imaging in Thermal Infrared from Shuttle

Anne Kahle, Jet Propulsion Laboratory

Orbital Surveys of Solar Stimulated Luminescence

W.R. Hemphill, U.S. Geological Survey, Reston, Virginia, A.F. Theisen, R.M. Tyson, and J.S. Granata, U.S. Geological Survey, Flagstaff, Arizona

Shuttle Imaging Radar Research Facility

C. Elachi, J.B. Cimino, and D. Evans, Jet Propulsion Laboratory

Shuttle Digital Topographic Mapper

Michael Kobrick, Jet Propulsion Laboratory

Shuttle Polar Ice Sounding and Altimetry

T.H. Dixon and C. Elachi, Jet Propulsion Laboratory

Man-Tended Multisensor Satellites for Earth Resources

Dixon Butler, NASA/Space Sciences and Applications

SCHEDULED EXHIBITORS

Longman & Associates (Australia)

Optronics International, Inc.

Spot Image S.A.

Spot Image Corporation

Barringer Research

Spectral Data Corporation

IRIS International, Inc. (ERDAS)

DIPIX, Inc.

United States Geological Survey

National Aeronautics and Space Administration

National Oceanic and Atmospheric Association

Technology Application Center, University of New Mexico

Kansas Applied Remote Sensing Center, University of

Kansas

Laboratory for Applications of Remote Sensing, Purdue

University

1:30-5:00

PUBLIC MEETING ON NOAA'S LANDSAT PROGRAM

MONDAY, OCTOBER 3, 1983

EROS Data Center

Sioux Falls, South Dakota

Annually, NOAA holds a series of public meetings to exchange information and views about its Landsat Program with interested persons from the public and private sectors.

This year's meetings are offering a status report on Landsat operations, systems, and the process of private sector transfer; half of each day's proceedings is reserved for open discussions on product prices, TM scene collection and processing priorities, and the critical need for value-added service industry involvement in TM product activities.

For additional information or to pre-register for any of these public meetings, contact: SES, Inc., P.O. Box 2697, Springfield, VA 22152. Telephone: (800) 424-2733, extension 328.

Space at some meeting locations is limited, so pre-registration is advised. In all cases, registration is free of charge.

REGISTRATION:

Registration may be made by use of the attached form. Pre-registration fee is \$95.00. On-site registration will be \$110.00. Registration for spouses will be \$40.00 (includes luncheon, socializer, and banquet). Registration fees for students will be \$20.00 (does not include socializer, luncheon, or banquet). Mail pre-registration form to:

Pecora VIII

P.O. Box 80937

Sioux Falls, S.D. 57116

Make checks payable to Pecora VIII Symposium.

HOTEL RESERVATIONS

The Pecora VIII Symposium will be conducted at the Ramada Inn in Sioux Falls, South Dakota, where a block of rooms has been reserved for symposium participants. Special symposium rates have been obtained at the Ramada Inn. Rates are \$28.50 plus tax for single rooms and \$36.00 plus tax for double rooms. Participants are responsible for making their own reservations directly with the hotel. The address of the symposium hotel is:

Ramada Inn

2400 N. Louise

Sioux Falls, South Dakota 57107

Phone: (605) 336-0650

TOURS TO EROS DATA CENTER:

Tours to the U.S. Geological Survey's EROS Data Center will be arranged throughout the symposium. There will be no additional fees for these tours.

PROCEEDINGS:

A bound volume of a Proceedings of all presentations will be distributed to registrants in January, 1984. Additional copies of the Proceedings may be purchased for \$15.00 each. Copies can be ordered at the Symposium or by writing to Pecora VIII at the address given above.

Current proposals and viewpoints on the future of U.S. remote sensing satellite programs will be addressed by Administration and Congressional officials. Representatives from U.S. industry will present plans for private sector operation of civil satellites. Future Space Shuttle remote sensing activities will be covered, including advanced imaging systems such as the Large Format Camera and multilinear arrays. Papers on Landsat 4 Thematic Mapper will describe sensor performance and present future plans. Invited theme papers will describe plans for the National Digital Cartographic Data Base, National High Altitude Photography Program, and the emerging analytical capabilities of microcomputers.