

PRELIMINARY PROGRAM



AMERICAN WATER RESOURCES ASSOCIATION

Symposium on
SATELLITE HYDROLOGY

(Fifth Annual William T. Pecora Symposium)

June 10-15, 1979

Holiday Inn-Downtown Hotel
Sioux Falls, South Dakota

Host:

EROS DATA CENTER

Co-sponsoring Agencies and Societies:

- American Geophysical Union
- American Meteorological Society
- American Society of Civil Engineers
- American Society of Photogrammetry
- Association of American Geographers
- Canada Centre for Remote Sensing
- Canadian Advisory Committee on Hydrology
- International Association of Hydrogeologists
- International Association of Scientific Hydrologists
- International Glaciological Society
- National Aeronautics and Space Administration
- National Oceanic and Atmospheric Administration
- National Water Well Association
- U. S. Army Corps of Engineers
- U. S. Geological Survey
- U. S. National Committee on Scientific Hydrology

General Chairman

DONALD R. WIESNET

NOAA/NESS, S-33
Washington, D.C. 20233
(301) 763-8036

Technical Program Chairman

MORRIS DEUTSCH

U. S. Geological Survey /EROS Program Office
1925 Newton Square, East - Mail Stop 730
Reston, Virginia 22090
(703) 860-7872

SUNDAY P.M. * * JUNE 10

REGISTRATION
3:30 P.M. - 8:30 P.M.

MONDAY * * JUNE 11

PLENARY SESSION
9:00 A.M. - 12:00 Noon

*Challenges for Satellite Technology in National Water
and Environmental Programs*

Chairman: David S. Johnson, Associate Director, NOAA

Welcoming Remarks

PRESENTATIONS:

1. *Remote Sensing in Hydrology - A Challenge to Scientists*, Joseph Cragwall, Associate Director, U. S. Geological Survey.
2. *Satellite Applications in River and Flood Forecasting*, Robert Clark, Associate Director, NOAA/National Weather Service.
3. *NASA Water Resources/Hydrology Remote Sensing Program in the 1980's*, Pitt Thome, Director, Resource Observation Division, NASA.
4. *Corps of Engineers Utilization of Satellites for Hydrologic Purposes*, Vernon Hagen, Acting Chief, Hydraulics Hydrologic Branch, U. S. Army Corps of Engineers.
5. *Agriculture's Needs Related to Satellite Hydrology*, Ted Engman, Chief, Hydrology Laboratory, USDA.
6. *A Review of Canada's Present and Future Remote Sensing Activities Relative to Hydrology*, Ed Langham, Deputy Manager, SURSAT Project Office, Department of Energy, Mines and Resources, Canada.

EDUCATIONAL SESSIONS
1:30 P.M. - 5:00 P.M.

SATELLITE TECHNOLOGY

Session 1.

Earth Resource Satellites
(Presented by staff of the EROS Data Center)
Principal Instructor: James Lucas

Pecora Symposium (1979)

Session 2.

Meteorological Satellites
(Presented by staffs of the NOAA/National Environmental Satellite Service and the Environmental Data Information Service)
Principal Instructor: Eugene Hoppe

RECEPTION
7:30 P.M.

TUESDAY * * JUNE 12

APPLICATIONS SESSIONS
(Concurrent)
8:30 A.M. - 10:30 A.M.

Session 3.

Hydro Data Relay
Chairman: Allen F. Flanders, Assistant to the Associate Director, National Weather Service.

Session 4.

Meteorology
Chairman: Jay Winston, Director, Meteorological Satellite Laboratory Service, NOAA/NESS.

POSTER SESSIONS AND EXHIBITS
10:30 A.M. - 12:00 Noon

Presentation of papers and exhibits related to subjects in Sessions 1-4.

KEYNOTE LUNCHEON
12:15 P.M. - 1:15 P.M.

History of the LANDSAT Application Program
Dr. Arch Park, Program Manager,
LANDSAT-D Applications, General Electric Corporation

APPLICATIONS SESSIONS
(Concurrent)
1:30 P.M. - 3:30 P.M.

Session 5.

Snow and Ice
Chairman: Albert Rango, Senior Research Hydrologist, Hydrospherics Sciences Branch, NASA.

Session 6.

Water Quality and Environment

Chairman: Richard Blackwell, Supervisor, Earth Resources Applications Group, Jet Propulsion Laboratory.

POSTER SESSIONS
3:30 P.M. — 5:00 P.M.

Presentation of papers and exhibits related to subjects in Sessions 5-6.

FILM FESTIVAL
7:30 P.M.

Chairman: Lt. Craig Berg, NOAA Corps.

WEDNESDAY ★ ★ JUNE 13

SATELLITE HYDROLOGY OVERVIEW
(Panel)
8:30 A.M. — 9:45 A.M.

Moderator: Paul Bock, Professor of Hydrology and Water Resources, University of Connecticut; Member, Space Applications Board, National Academy of Engineering.

1. *Water Sensing Satellites*, S. Walt McCandless, User Systems Engineering Company.
2. *Satellite Data Requirements of the International Water Resources Community*, Vincent D. Salomonson, Chief Scientist, LANDSAT-D Program, Goddard Space Flight Center, NASA.
3. *An Overview of Applications of Satellite Data for the Hydrological Sciences*, Donald R. Wiesnet, Senior Research Hydrologist, NOAA/NESS; Morris Deutsch, Research Coordinator Hydrology, EROS Program, U. S. Geological Survey.
4. *Satellites Versus Conventional Methods in Hydrology*, Daniel G. Anderson, Chief, Office of Remote Sensing, Water Resources Division, U. S. Geological Survey.

FUTURE OF SATELLITE REMOTE SENSING
IN STATE AND LOCAL GOVERNMENTS
10:00 A.M. — 12:00 Noon

Chairman: Leonard C. Slosky, Staff Director, Natural Resource and Environment Task Force, Intergovernmental Science, Engineering and Technology Advisory Panel, Executive Office of the President.

APPLICATIONS SESSIONS
(Concurrent)

1:30 P.M. — 3:30 P.M.

Session 7.

Surface Water

Chairman: Albert N. Williamson, Research Physicist, Waterways Experiment Station, U. S. Army Corps of Engineers.

Session 8.

Wetlands

Chairman: Virginia Carter, Research Biologist, Water Resources Division, U. S. Geological Survey.

POSTER SESSIONS
3:30 P.M. — 5:00 P.M.

Presentation of papers and exhibits related to subjects in Sessions 7-8.

WILLIAM T. PECORA AWARDS DINNER
7:30 P.M.

Keynote Speaker:

The Honorable *Thomas Anderson*, Michigan House of Representatives.

Presentation of the Pecora Award:

Pitt Thome, Director, Resource Observation Division, NASA.

Presentation of Centennial Award to the U. S. Geological Survey by the American Water Resources Association:

Daniel D. Evans, President, AWRA.

THURSDAY ★ ★ JUNE 14

APPLICATIONS SESSIONS
(Concurrent)

8:30 A.M. — 10:30 P.M.

Session 9.

Coastal Zone

Chairman: John Estes, Head, Education and Training, Remote Sensing Institute, South Dakota State University.

Session 10.

Water Use and Management

Chairman: Fred Ruggles, Hydraulic Engineer, Office of the Assistant Chief Hydrologist for Scientific Publications and Data Manage-

FRIDAY

★ ★

JUNE 15

FIELD TRIP
8:00 A.M. — 5:30 P.M.

Field Trip Leaders:

Donald G. Moore, Head, Education and Training, Remote Sensing Institute, South Dakota State University.

Richard Fidler, District Chief, Water Resources Division, U. S. Geological Survey.

FIELD TRIP
REMOTE SENSING OF HYDROLOGY IN
EASTERN SOUTH DAKOTA
(Saturday, June 9 and Friday, June 15)

A one day field trip illustrating the remote sensing of hydrology in eastern South Dakota will be conducted in connection with the Pecora Symposium. The tour is being organized by the Remote Sensing Institute of South Dakota State University and the Water Resources Division of the USGS. The tour will consist of six stops for observations of the following:

1. Thermal Inertia Mapping for Hydrogeologic Applications
2. Hydrologic Properties of Soil
3. Wetland Ecology of Shallow Glacial Prairie Potholes
4. Irrigation
5. Hydrogeologic Applications of Energy Balance Measurements
6. Data Collection Platforms with Hydrologic Measurements

All stops will be manned by professionals who have conducted remote sensing or other research investigations at the sites. Tour guides will provide general commentary on the hydrology of Eastern South Dakota while in transit between stops. The tour will be conducted on Saturday, June 9, and repeated on Friday, June 15. Travel will be by bus which will leave Sioux Falls at 8:00 A.M. and return at 5:30 P.M. A guidebook will be provided which will give the itinerary, contain illustrations of remote sensing and ground data, and describe the test sites and uses of remote sensing for measuring or mapping particular characteristics. A set of descriptive slides will be provided to each field trip participant. These will be useful for class lectures and for providing an understanding of the applications of remote sensing to the water resources of the glacial landscape of eastern South Dakota.

Each trip will be limited to 45 persons, on a first-come, first-served basis. The only cost to participants will be a \$5.00 charge for a luncheon. This cost is to be paid by the participants at the luncheon.

Panel Members:

1. Dr. Frank Press (Tentative), Scientific Advisor to the President, Office of Science and Technology Policy.
2. Dr. Fred Doyle, Acting Director, EROS Program, U. S. Geological Survey.
3. Ms. Sally Bay Cornwell, Director, Environmental Data Center, Office of the Governor, California.
4. Mr. Bruce Rado, Georgia Department of Natural Resources.
5. Mr. James J. Gehrig, Staff Member, U. S. Senate Committee on Commerce, Science, and Technology.

POSTER SESSIONS
10:30 A.M. - 12:00 Noon

Presentation of papers and exhibits related to subjects in Sessions 9-10.

APPLICATIONS SESSIONS
1:30 P.M. - 3:30 P.M.

- Session 11.
Ground Water
Chairman: Wayne Pettyjohn, Professor, Department of Geology, Ohio State University.
- Session 12.
Soil Moisture
Chairman: Bruce Blanchard, Director, Remote Sensing Center, Texas A & M University.

FILM FESTIVAL
(Tuesday Evening, June 12)

The Film Festival will begin with a preview of sites that will be included as a part of the field trip on Friday, June 15. Following this viewing, additional films on remote sensing techniques and applications will be shown.

EROS DATA CENTER TOURS

During the Symposium there will be tours to the EROS Data Center. Tentatively, the tours are planned for Wednesday afternoon, Thursday, and Friday. Sign up sheets will be available at the registration desk.

We urge each attendee to take advantage of seeing this internationally recognized facility and view the activities of the Center. Literature about the EROS Data Center will be available upon your arrival in Sioux Falls.

★ ★ REGISTRATION FORM ★ ★ **AWRA SYMPOSIUM on SATELLITE HYDROLOGY** ★ ★ REGISTRATION FORM ★ ★
(Fifth Annual William T. Pecora Symposium) - Sioux Falls, South Dakota - June 10-15, 1979

Please TYPE or PRINT LEGIBLY your name and address exactly as you would like it shown on the official AWRA register. Please include business or professional affiliation and phone number.

Dr. Mr. Mrs. Miss Ms. Prof.

NAME: _____
ADDRESS: _____

BUS./PROF. AFFIL.: _____

BUSINESS PHONE NO.: () _____ HOTEL: _____

Will your spouse be attending? _____ If so, would she/he be interested in visiting local points of interest? _____

SYMPOSIUM REGISTRATION FEES: (Required of all participants)

- Registration
- Student Registration

SPECIAL EVENTS: (See Program for further information)

- Keynote Luncheon - Tuesday, June 12, 12:15 P.M.
- William T. Pecora Awards Dinner - Wednesday, June 13, 7:30 P.M.
- Field Trip - Remote Sensing of Hydrology in Eastern South Dakota
- (Please refer to write-up on this event for specific information concerning luncheon cost. Note that participation on this field trip is limited.) Please indicate which day you desire to participate in this trip:
_____ Saturday, June 9 _____ Friday, June 15

SYMPOSIUM PROCEEDINGS (Pre-publication Price)

(This special price is available only to individuals who attend the Symposium and provide payment by June 14, 1979.)

PAYMENT by: Cash Check (No.) P.O. (No.) Date _____ [An official Purchase Order (in lieu of cash or check) is acceptable.]

(REFUND POLICY: Registration fees and Special Events tickets are refundable until June 8, 1979.)

PLEASE CHECK ONE OF THE FOLLOWING: _____ Currently a member of AWRA. _____ Not currently a member of AWRA.

COST	AMT. PAID
\$55.00	
20.00	
5.00	
9.50	
---	---
28.00	
TOTAL	\$

ROOM RESERVATION CARD

American Water Resources Association
Symposium on SATELLITE HYDROLOGY
June 10-15, 1979

Please reserve a guest room as follows:

Room with king bed for _____ person(s).
Room with two double beds for _____ person(s).

NAME: _____

ADDRESS: _____

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