



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

5/3/85 IC 5-5

To : Al Watkins

From: Lisa Shaffer

FYI - publicity
from WMO for your
Workshop.

Action	
<u>Info</u>	
Watkins	<input checked="" type="checkbox"/>
Landis	<input type="checkbox"/>
Metz	<input type="checkbox"/>
Byrnes	<input type="checkbox"/>
Rohde	<input type="checkbox"/>
Admin.	<input type="checkbox"/>
DP&DB	<input type="checkbox"/>
CSB	<input type="checkbox"/>
TD&AB	<input checked="" type="checkbox"/>
Pettinger	<input type="checkbox"/>
Alaska	<input type="checkbox"/>
Technicolor	<input type="checkbox"/>
NOAA	<input type="checkbox"/>

(distributed 5-16-85)

WMO Ed. Tr.

ORGANISATION MÉTÉOROLOGIQUE MONDIALE



WORLD METEOROLOGICAL ORGANIZATION

IC 5-57

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No. E/CRS-1585

GENEVA, 27 March 1985

Annex: 1 (available in English only)

Subject : 24th International Remote Sensing Workshop, EROS Data Center, Sioux Falls, South Dakota, U.S.A., 3 September to 4 October 1985

Action required: For information only

Dear Sir/Madam,

I have been advised that an International Remote Sensing Workshop, on the fundamentals of applications and analysis techniques, will be held at the EROS Data Center, Sioux Falls, South Dakota, U.S.A., from 3 September to 4 October 1985.

The workshop will be conducted in English only and will be addressed to scientists, engineers and resource managers. It will concentrate on a particular discipline and your attention is drawn to the programme and other details in the attachment to this letter.

Applications, to be received by 15 June 1985 as well as requests for additional information, should be sent to:

Training Section, Office of International Geology
U.S. Geological Survey
National Center (917)
RESTON, Virginia 22092
U.S.A.

Yours faithfully,

(G.O.P. Obasi)
Secretary-General

To Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services) of Members of WMO (PR-3804)

cc: UNDP Resident Representatives)
Hydrological Advisers to Permanent) (for information)
Representatives)

WORLD METEOROLOGICAL ORGANIZATION

E/CRS-1585, ANNEX

ANNOUNCEMENT

INTERNATIONAL REMOTE SENSING WORKSHOP
EROS DATA CENTER, SIOUX FALLS, SOUTH DAKOTA
SEPTEMBER - OCTOBER 1985

In response to continuing interest in the use of remote sensing technology for natural resources inventory and assessment, the U.S. Geological Survey offers a program of training workshops for non-U.S. scientists, engineers, and resource managers. Since 1973, more than 600 scientists representing more than 80 countries have participated in these workshops.

In 1985 this program will include:

The 24th International Workshop in Remote Sensing: Fundamentals of Applications and Analysis Techniques, September 3 - October 4, 1985, Sioux Falls, South Dakota.

INTERNATIONAL WORKSHOP: OBJECTIVES AND PROGRAM

The workshop is designed to familiarize the participant with the data characteristics, advantages and limitations, and applications of a variety of remote sensing systems, as well as to provide experience in analyzing and interpreting remotely sensed data to produce information useful in resource management and planning. Emphasis is placed on the analysis of Landsat data, although attention is also given to the interpretation of aerial photographs. The workshop concentrates on discipline applications and will include both manual and introductory digital data analysis. The program consists of a combination of classroom lectures, workshop exercises, homework, and field work. Limited demonstrations will be given on computer-driven analysis equipment.

It is assumed that participants have a knowledge of the basic fundamentals of remote sensing. For those who have previously attended an introductory workshop at the EROS Data Center, or with equivalent experience, this intensive workshop will provide in-depth and detailed training in a specific discipline. For those with little previous experience in remote sensing, the workshop should provide valuable discipline-specific training. The workshop is viewed as providing a foundation upon which the participant can build, and hopefully will allow him to proceed in the use of remote sensing with a thorough understanding of techniques, uses, and possible difficulties that he may encounter.

The first week consists of a general introduction to the fundamentals of remote sensing and is intended to provide all participants, regardless of previous experience, with a solid general background. The second week is devoted to in-depth discussions of the fundamentals as they refer specifically to applications disciplines such as geology, hydrology, vegetation analysis, land use planning, and agronomy, instruction in manual analysis and interpretation techniques, integration of various data sources, and a review of the various uses of remote sensing as applied to the discipline of interest. The third week is spent on an introduction to the uses of digital image analysis and enhancement, and the use of digital techniques in merging and integrating data from various sources in the preparation of useful interpretation products. During the fourth week, a field trip to many of the places studied in the second and third weeks incorporates the concept of ground verification and field familiarization in the interpretation process. The bulk of the fifth week is spent on the interpretation of Landsat imagery by the attendee, usually of an area in his own country or in a region with which he is familiar and in which he has particular interest. The attendee is asked to define a specific interpretation problem, analyze and interpret the imagery, and report results.

First Week:

Fundamentals of Remote Sensing

- The electromagnetic spectrum, energy-matter interactions.
- Image formation.
- The Landsat system.
- Principles of image analysis and interpretation.

Second Week: [second through fourth weeks are discipline-specific; the class will be organized into groups with specific discipline interests (i.e., earth science/hydrology, and vegetation science/land use)].

Image formation and sensor systems.

Manual analysis and interpretation of remotely sensed data.

Integration of remotely sensed data with other data types.

Applications of remotely sensed data.

Statistical techniques, sampling, inventory methods.

Third Week:

Introduction to digital analysis techniques.

Workshop exercises--practical experience in data analysis and interpretation.

Environmental Data Base preparation.

Geographic Information Systems (GIS).

Fourth Week:

Field-trip--verification of interpretation exercise results.

Incorporation of field observations in interpretation.

Fifth Week:

Guided individual study of Landsat imagery of participants' countries.
Discussion of international aspects of satellite programs.
Project planning.
Summary seminars.
Closing ceremony.

PROCEDURE FOR APPLICATION

Applicants are required to use the enclosed Application Form (facsimiles or machine copies are acceptable). Candidates sponsored by a university, private company, or a non-national government entity must submit their applications through their national government agency. All applications should be sent to:

Training Section, Office of International Geology
U.S. Geological Survey
National Center (917)
Reston, Virginia 22092
U.S.A.

Schedule pertinent to the workshop series:

June 15, 1985 - Deadline for receipt of application for the workshop.

June 29, 1985 - Notification by USGS to those selected for the workshops.

July 20, 1985 - The advance deposit of \$500 is due.

September 1, 1985 - Twenty-fourth International Workshop begins in

Sioux Falls, South Dakota. \$2,000 balance for International
Workshop tuition due.

COST

The total workshop fee is \$2,500 for the International Workshop which includes the cost of instruction, training materials, and workshop bus travel. Payment of the workshop fee must be made prior to the start of the workshop.

An advance deposit of \$500, which is not refundable, is part of the total fee and is required within 6 weeks after notification of acceptance (refer to time schedule in previous section). This deposit includes the cost of representative Landsat imagery of the attendee's study area for the International Workshop. This imagery is produced by EDC prior to the start of the workshop. If the accepted candidate does not attend the workshop, the imagery will be sent to the address cited on the application.

Bank checks or drafts made payable to the U.S. Department of the Interior - U.S.G.S. in U.S. dollars should be sent to:

Training Section, Office of International Geology
U.S. Geological Survey
National Center (917)
Reston, Virginia 22092
U.S.A.

Please do not send traveler's checks.

The cost of international travel to and from Sioux Falls and living expenses for attendees during the workshop are to be met by the sponsoring entities. At this time a per diem rate of \$60 (U.S.) is sufficient to cover living expenses. However, this might change by the time the course commences. The USGS will provide pertinent information at least 1 month before the course is scheduled to begin.

A statement is required for each attendee that all hospital and health costs not covered by insurance will be paid by the sponsor. A form for providing this statement is included with the application.

LANDSAT IMAGERY OF PARTICIPANT'S COUNTRY

An important part of the International Remote Sensing Workshop is the interpretation of Landsat imagery of the attendee's country or an area with which the attendee is familiar. Because this imagery must be ordered in advance of the workshop, each application may suggest the desired geographic study area and state the objective(s) of the proposed analysis on the application form. Providing this information is received sufficiently far in advance of the course and where the availability of good quality imagery permits, an attempt will be made to acquire data suggested by the participant. Also, the applicant may suggest a preference for some additional imagery for either (1) repetitive (seasonal) coverage--for temporal analysis of a single scene or (2) coverage of additional areas. In either case, the imagery ordered will not exceed a total of three scenes.

As image availability, quality, and cloud cover may limit the extent to which a request can be filled, the applicant should identify alternate areas. The geographic location of the areas for which imagery is preferred should be specified in the appropriate space on the application; the specific Landsat image identification numbers (if known) should be listed. Attendees may wish to bring with them any reference material that would be useful for their individual projects; this would include thematic maps and supporting documentary material (geology, land use, soils, vegetation, etc.).

Because the workshops are intensive, and to insure adequate instructor-attendee interaction, enrollments will be limited to approximately 25 persons for the International Workshop. Application deadlines must be met to allow time for ordering needed imagery and materials and for planning workshop details. As all lectures and discussions will be in English, attendees must be able to understand, speak, and read this language. If possible, applicants should provide English language facility test scores. Interpreters cannot be provided.

Candidates who cannot be accommodated in a particular workshop will be given priority in a succeeding workshop.

Additional information about the workshop program, the training center, and Sioux Falls will be sent approximately 1 month prior to the beginning of the workshop to candidates who are accepted for attendance.

Many participants precede or follow their trip to the International Remote Sensing Workshops with visits to the other U.S. Government agencies and university research centers related to their fields of interest. Some assistance in planning these activities can be provided if specific agencies, personal contacts, or types of activities are designated by the applicant.

Application Form

International Remote Sensing Workshop, 1985

Sioux Falls, South Dakota

September 3 - October 4, 1985

The International Workshop is designed to familiarize the participants with the basic concepts of the analysis of remotely-sensed data for natural resource inventory and assessment.

1. Name (please underline name of family):

2. Birth date: _____ (month, day, year)

2a. Country of Citizenship: _____

3. Official address (Organization, Street, City, State or Province, Country):

4. Present position (give title and brief description of duties and responsibilities):

5. Education (please summarize your educational background in the spaces below):

Institution and Location Dates of Attendance Degrees Earned Fields of Study

6. Experience (please include specific experience in remote sensing, including photo interpretation and other forms):

7. English language facility (please indicate good, fair, poor, or type of test and test scores);

Speaking: _____ Reading: _____ Writing: _____ Type of Test: _____
Test Scores: _____

8. Please describe any association with the Landsat program (as a principal investigator, a co-investigator, or in any other capacity):

9. What are your objectives in attending the Workshop? Please be as specific as possible:

10. How will your attendance be financed?

11. A limited amount of Landsat imagery of a portion of your country will be ordered for study during the 24th International Workshop. For this purpose, please suggest the geographic coordinates (using latitude and longitude) of a study area (maximum size, 6,000 km²) and include a location map. Also, provide coordinates and maps for second and third priority areas in case good quality images of first priority area are not available. Also, list any specific Landsat imagery identification numbers and/or specific dates or month(s) of the year which are preferred, if known. These requests will be accommodated, if possible.

<u>Priority</u>	<u>Coordinates (Degrees and Minutes)</u>	<u>Specific Desired Month(s), Image Identification Numbers (if known), etc.</u>
1.		
2.		
3.		

If you have provided specific image identification numbers, do you wish us to: attempt to provide those specific images regardless of our assessment of their quality, or select what we consider to be the best quality images? (check one of the above)

In addition to the primary set of images, a small number of additional images may be provided. If so, do you prefer: additional dates of images of your primary area, or images of one of your lower priority areas? (check one of the above)

Please summarize briefly the objective(s) of your study of this imagery:

MEDICAL EXPENSES

To Whom it May Concern:

The person named below is a candidate for the U.S. Geological Survey International Remote Sensing Workshop program at Sioux Falls, South Dakota. This statement certifies that any medical expense incurred by the candidate during his stay in the United States, and not covered by insurance, will be paid for by his sponsor.

Candidate

Sponsor

Signature of Sponsor's Authorized
Representative

Date: _____

ITINERARY

ARRIVAL IN U.S.

Date:

Place:

ARRIVAL IN SIOUX FALLS (include flight schedule and number if known)

Date:

DEPART FROM U.S.

Date:

Place:

Please complete this portion if you wish assistance in scheduling other activities prior or following your attendance at the Workshop.

OTHER INSTITUTIONS TO BE VISITED IN U.S.

Name and Location

Desired Dates

OFFICIAL REQUEST FOR TRAINING

In order for the U.S. Geological Survey to provide training to a foreign national, an official request for training from either an international organization or an element of the candidate's national government is required. The official sponsor does not necessarily have to be the financial sponsor.

"We hereby request the U.S. Geological Survey to provide a training program

to _____
(Candidate's Name)

in the field of _____
(Title of Course)

from the U.S. Geological Survey."

Official Sponsor:

Signature of Sponsor's Authorized
Representative

Government Department and Address

Date