Fifth IDRC Conference – 1990
Chairman: Dave Wetzel

5th IDRC
by Dave Wetzel

My running the 5th IDRC was an obsession as well as a privilege. At the time my presidency of the council for NIR overlapped with chairmanship of the 5th IDRC. Between those two responsibilities, my day job at KSU was at risk. Although it was I who nominated Woody Barton to handle the 3rd conference, I at that time formulated plans for when my turn would come. I set the following goals:

1) Allow time for and stimulate discussion in each session.
2) Bring back limited, invited lectures to be supplemented by invited brief presentations by discussants at each session with time allowed for interaction from the assembly.
3) Attract new participants from the chemistry and spectroscopy communities.
4) Structure the participant cost to encourage full on-campus activity while not in sessions and discourage single day drop-in attendants.
5) Provide a social and recreational setting, that conferees would appreciate, that would allow "shop talk" and camaraderie to flourish.
6) Have a formal program with balance to include theory, chemistry, various wavelengths, remote sensing, NASA, as well as medical, agricultural, and industrial applications.

Most of the goals were obtained but, not without conflict and criticism. My wife Connie and my full-time research associate, Arnold Eilert were pressed into service and I paid an undergraduate KSU student, Jason to be available on-site to help out while the rest of us were in session. Beside the usual instrument vendors, we got incidental sponsorship from "Beer Nuts" and "Roller Blades" and I purchased volleyball, tennis rackets and balls, also, bicycles that were sold for half the cost at the end of the week. We also persuaded a friend of the conference to donate t-shirts with the diffuse reflectance graphic drawn by the A*nal* C*hem*. staff artist.

One amusing incident occurred in reference to the banquet menu. Chuck Miller signed up for prime rib and below his name he wrote, Max Plank, the institute where he was a post-doc. My dear wife Connie, who was arranging the banquet, became concerned and said, “Max Plank did not designate his preference for prime rib or chicken”. Randy Wehling, in his deep, bass voice told Connie that he (Max) would not be eating at the banquet with us.

To bring in new people, Arnold and I distributed fliers in person at FACSS, one EAS, and two Pittcons between the 4th and 5th IDRC. That scheme worked to bring in “new blood” including new speakers. We invited Heinz Siesler from the University of Essen (Germany), a post-doc from another German university, and two young scientists including a speaker on diffuse reflectance theory, from the Swiss Federal University at Lausanne. Peter Griffiths, who could not attend, helped identify some of those and suggested Curt Marcott, a professional spectroscopist, as a new invited speaker for the chemistry session. We also brought in two space people from NASA and asked NIR pioneer Kermit Whetsel to be the honored guest of the 5th IDRC.

To provide balance and avoid duplication, I arranged all of the sessions and invited all of the speakers. I then arranged for individuals to chair each session. The objective of achieving balance and involving new people was in fact, achieved and the meeting was kept international by offering discounts but not travel expenses. The 5th IDRC was conducted at minimum cost to the participants and as a break even but nonprofit event. After the bills were paid, a substantial advance payment was made to Wilson College. In this way the funds were on their books to use as they saw fit and at the same time provide advance funding for a reasonable portion of the 6th IDRC. I did not gain any popularity from international participants who would have liked to receive financial sponsorship or from individuals who may have expected to be invited lecturers that they would be invited speakers. Every participant however, was invited to bring forth his or her idea at an appropriate place in a particular session at the discretion of the session chairperson. All in all I believe it was a good conference. I have no regrets and I will never forget how excited a group of adults were just to receive a silly t-shirt. Some of these I noticed resurface every two years.

5th INTERNATIONAL DIFFUSE REFLECTANCE CONFERENCE

GENERAL INFORMATION

The 5th International Diffuse Reflectance Conference, patterned after the Gordon Conferences, will convene researchers from all over the world to exchange technical information and experiences in analytical vibrational and electronic spectroscopy. The term "diffuse" spectroscopy implies high scatter to absorption rations invoking theoretical, experimental, and data considerations which differ from those of classical non-scattering absorption experiments. These considerations for reflectance or transmittance are the common ground of the Chambersburg week-long research conference.

The 1990 Conference will convene one session in the morning and one session in the evening over a six day period. There are no parallel sessions. Afternoons are set aside for one-on-one discussions, exhibits, posters, committee meetings, and physical exercise (jogging, volleyball, golf, tennis, swimming, etc). Be sure to bring your athletic equipment. A hospitality suite will be provided following each evening session; an excellent tune to clarify questions with the session speakers and to get acquainted. A full day short course on "Multivariate Statistics in Diffuse Reflectance Spectroscopy will be held prior to the meeting. The short course requires separate registration.

SESSION SCHEDULE

A special opening address of the Conference (Sunday evening), "New Hammer for Scientists: The past, present, and future of infrared microanalysis" will be presented by Robert G. Messerschmidt, Connecticut Instrument Corp. The Lecture will be followed by a mixer for all conferees and a meeting of the nine discussion leaders.

0 Sun 7:45 pm Optical and Spectroscopic Challenges

1 Mon 8:00 am Polymers and Chemicals

2 Mon 7:00 pm Spectroscopy with Electronic Wavelength Switching

3 Tue 8:00 am Diffuse Reflectance Theory and FTIR

4 Tue 7:00 pm Diffuse Spectroscopy Probing and Microprobing in UV-vis-NIR-IR

5 Wed 8:00 am DRIFTS and Deconvolution

6 Wed 7:00 pm Food and Agriculture NIR

7 Thu 8:00 am Chemistry and Statistical Interpretation of Structure

Thu 6:00 pm Banquet; Clifton E. Meloan, KSU Chem

8 Thu 730 pm Imaging (Wavelength Specific)

9 Fri 8:00 am Medical and Closed Environment Monitoring Needs for Space Flight or Earth

"Ask the array of experts"; TENATIVELY, Thu. 11:15 am. -

EXIBITORS

A partial list of exhibitors at the Conference includes: Bomem, Bran & Luebbe, Foss Corp., Harrick, Labsphere, I..T. Industries, Mattson, NIR Systems, Nicolet, Perten, Instruments, Spectra-Tech, Trebor.

WHERE WE MEET

Nestled in the foothills of the Appalachian Mountains, Chambersburg is near the Civil War Battlefields of Gettysburg (30 miles away) and Antiem (45 miles away). Chambersburg is approximately 88 miles from Washington, DC and 76 miles from Baltimore, Maryland. Wilson College, a private 4-year college for women, is located on a beautiful 300 acre campus in the heart of the lush Cumberland valley.

HOUSING

All Conference activities will be held on the campus of Wilson College. Therefore, living on campus in the dormitory is convenient, making it easy to interact with other participants. Participants using off-campus housing should make their own reservations.

AFTERNOON ACTIVITIES

Volleyball (a tradition of IDRC): See Bob Windham Monday at 3:00 pm on center field. Tennis: Bring your own racquet or use one of ours. Swimming: 2:00-5:00 pm except Friday, indoor pool in basement of dining hall Physical Fitness: Walk/run/jog at your own pace; for fun compete .to predict your own time on the last day (Free McClure will continue this IDRC tradition). Golf: See Bob Taylor Monday at 1:00 pm in dining hall. There is room for cycling or rollerblading if you have this type of equipment.

REGISTRATION

Registration of participants will begin on Sunday August 12, 1990 at 3:00 pm, and will continue morning! the first three days of the conference.

BANKING/ POST OFFICE/ TELEPHONE

Banking is available within 15 minutes walk of the campus between the hours of 9:00 am and 5:00 pm, Monday through Friday. The main post office is in downtown Chambersburg, approximately 20 minutes walk from the campus. Stamped mail may be deposited for mailing at the registration desk. Telephones are available in each dormitory. Wilson College: 717-264-4141.

CLIMATE AND CLOTHING

During the month of August the temperature is about 75 °F at night and 85 °F during the day. Usually the middle of August is relatively dry, however, an umbrella or raincoat would be advisable. Formal dress is not required to attend the conference or social events. However, most people will probably bring a tie to wear for the banquet.

PARKING/ PUBLIC TRANSPORTATION

Public transportation is very poor in and around Chambersburg. It is best to come by car if possible; free parking is provided on the campus of Wilson College. If you fly into Washington National or Baltimore-Washington International, car pooling may be possible Sunday and Friday with advance notice. Contact James B. Reeves III USDA/ARS, Beltsville, MD 20705 (Ph: 301-344-210C FAX: 301-344-1553), who is coordinating this effort.

5th IDRC DISCUSSION LEADERS AND SPEAKERS

Danny E. Akin
USDA/ARS; Russell Research Center
P.O. Box 85677
Athens, GA 30613, USA
Ph:
SESSION 8; Microspectrometer imaging of plant cell walls.

Franklin E. Barton II
USDA/ARS; Russell Research Center
P.O. Box 85677
Athens, GA 30613, USA
Ph: 404-546-3497
SESSION 7; Correlation of NIR to other regions of the spectrum.

Farnaz Boroumand
Ecole Polytechnique Federale de Lausanne
Laboratory of Chemical Technology CH-1015
Lausanne, SWITZERLAND Ph:(41) 21 6933623
SESSION 3; Quant. FTIR diffuse reflectance and transmittance spectroscopy of powders: I. Continuum Approach.

David G. Cameron
The Standard Oil Company
4440 Warrensville Ctr. Rd.
Cleveland, Ohio 44128, USA
Ph:
SESSION 5; Theory and practice of Fourier self-deconvolution.

Lelia Coyne
National Aeronautics and Space Administration
Ames Research Center; Mail Stop 239-4
Moffett Field, CA 94035, USA
Ph:
SESSION X; Clay-water-iron interaction via application of NIRA to Mars Soil Analog Material (MarSAMS).

James Duckworth
Galactic Industries Corporation
395 Main Street
Salem, NH 03079,'USA
Ph:
SESSION 7; How to tell if your multivariate expression is working.

Thomas Eickhoff
I. Physikalisches Institut der RWTH Aachen
Sommerfeldstr. 28
5100 Aachen 1, FRG
Ph: (49) 241 807175
SESSION 5; Radiative transfer simulation c DRIFTS spectra.

Arnold J. Eilert
Kansas State University
Shellenberger Hall
Manhattan, KS 66506, USA
Ph: 913-532-6161
SESSION 2; Experimentation with a research acousto-optic near-IR spectrometer.

William G. Fateley
Kansas State University
Department of Chemistry; Willard Hall
Manhattan, KS 66506, USA
Ph: 913-532-6298
SESSION 2; NIR via HTS (Hadamard Transform Spectroscopy).
SESSION 5; Discussion Leader.

David J J. Fraser
Xerox Corporation; Chemical Analysis Are;
800 Philips Rd.; 139-64A
Webster, NY 14580, USA
Ph: 716-422-0844
SESSION 5; Diffuse transmittance spectroscopy: Interaction between scattering and absorption coefficients.

5th IDRC DISCUSSION LEADERS AND SPEAKERS

Ian Murray
Scottish Agricultural College
581 King St.
Aberdeen AB9 1UD, SCOTLAND
Ph: (44) 224 480291 (ext. 2241)
SESSION 1; NIR and structure.

Karl H. Norris
11204 Montgomery Rd.
Beltsville, MD 20705, USA
Ph: 301-937-7547
SESSION 9; NIR medical experiences.

Lucasz N. **Pietrzak**
Agriculture Canada; Plant Research Centre
Grain Quality Lab
Ottawa, Ontario K1A OC6, CANADA
Ph: 613-495-3700
SESSION 4; UV wavelength specific diffuse reflectance and transmittance microprobing of seed cross-sections.

Robert Rosenthal
Futrex Industries
7845 Airpark Road; P.O. Box 2159
Gaithersburg, MD 20760, USA
Ph: 301-948-7650
SESSION 9; Very near-IR diffuse transmittance in patient monitoring.

Andrew Scott
Dipix Technologies, Inc.
1050 Bayter Road
Ottawa, Ontario K2C 3P1, CANADA
Ph:
SESSION 4; Quantitation by visible wavelength-specific macro or micro digital imaging.

Heinz W. Siesler
University of Essen
Dept. of Physical Chemistry
D 4300 Essen, FRG
Ph: (49) 2011832927
SESSION 1; NIR and IR diffuse spectroscopy of polymers.

Scott Strand
Spectra Tech, Inc.
652 Glenbrook Rd.; P.O. Box 2215
Stamford, CT 06906, USA
Ph: 203-357-7005
SESSION 4; FTIR microscopy of optically challenging specimens.

Russell Tkachuk
Canadian Grain Commission
Grain Research Lab; 1404-303 Main St.
Winnipeg, Manitoba R3C 3G8, CANADA
Ph: 204-983-3325
SESSION 6; UV-vis-NIR diffuse reflectance performance of a commercial spectrometer.

Randy L. Wehling
University of Nebraska; Dept. of Food Science
241 Food Industry Complex
Lincoln, NE 68583, USA
Ph: 402-472-2857
SESSION 1; Discussion Leader.

Lois G. Weyer
Hercules Inc.
Research Center
Wilmington, DE 19894, USA
Ph: 302-995-3256
SESSION 7; Discussion Leader.

Kermit Whetsel
1501 Dobyns Dr.
Kingsport, TN 37664, USA
Ph:
SESSION 1; NIR spectroscopy of liquid chemical substances and mixtures.

Philip C. Williams
Canadian Grain Commission
Grain Research Lab; 1404-303 Main St.
Winnipeg, Manitoba R3C 3G8, CANADA
Ph: 204-983-3344
SESSION 6; Discussion Leader.

5th IDRC DISCUSSION LEADERS AND SPEAKERS

Mike Fuller
Nicolet Instrument Co.
5225 Verona Rd.
Madison, WI 53711, USA
Ph: 608-271-3333
SESSION 5; Current DRIFTS.

Jeff Hall
Dept. of Endocrinology; Hosp. for Sick Children, Toronto, and CME Telemetrix, Inc.
6850 Gorne Dr.
Missisauga, Ontario L45 1P1, CANADA
Ph: 416-612-0411
SESSION 9; Some bioanalytical applications of NIR spectroscopy.

Mike J. Hammersley
Wool Research Organization of New Zealand
Private Bag
Christchurch, NEW ZEALAND
Ph:(64)3 252421
SESSION 6; NIR analysis of wool and associated material.

David Honigs
NIR Systems
2441 Linden Lane
Silver Spring, MD 20910, USA
Ph: 301-495-7169
SESSION 7; Band assignment in NIRS.

David W. Hopkins
Kellogg Company; Chemistry Department 235 Porter Street/P.O. Box 3423 Battle Creek, MI 49016-3423, USA
Ph: 616-961-6413
SESSION 4; Discussion Leader.

Lee F. Johnson
National Aeronautics and Space Administration
Ames Research Center
Moffett Field, CA 94035, USA
Ph:
SESSION 8; Biochemical composition through remote sensing.

Gabor J. Kemeny
B8 Kissam Road
Peekskill, NY 10566, USA
Ph: 914-524-2735
SESSION 2; Engineering considerations of a double beam acousto-optic tunable spectrometer.

Isaac Landa
L.T. Industries
6110 Executive Blvd.
Rockville, MD 20852, USA
Ph: 301-468-6777
SESSION 9: Discussion Leader.

Jeffrey Levin
North American Nestle Organization Laboratory
809 Collins Ave., P.O. Box 384
Marysville, OH 43040, USA
Ph: 513-644-8133
SESSION 6; Coordination of NIR applied to quality control for just-in-time manufacturing

Robert A. Lodder
University of Kentucky; College of Pharmacy
Rose Street
Lexington, KY 40536-0082, USA
Ph: 606-257-9232
SESSION 9; NIR spectra of living aorta tissue

5th IDRC DISCUSSION LEADERS AND SPEAKERS

Andreas Mandelis
Photoacoustic and Photothermal Sciences Lab., Dept. of Mechanical Engg. and Ontario Laser and Lightwave Res. Ctr.; University of Toronto
Toronto, Ontario M5S 1A4, CANADA
Ph: 416-978-5106
SESSION 3; Quant. FTIR diffuse reflectance and transmittance spectroscopy of powders: II. Large particle size (discontinuum) approach.

Curtis A. Marcott
The Proctor & Gamble Company Miami Valley Laboratories; P.O. Box 398707
Cincinatti, OH 45239-8707, USA
Ph: 513-245-2806
SESSION 3; Time-resolved infrared linear dichroism of polymer film under small amplitude oscillatory strain.

Howard Mark
Bran & Luebbe Analyzing Technologies
103 Fairview Park Drive
Elmsford, NY 10523, USA
Ph: 914-524-8154
SESSION 3; Discussion Leader.

W.F. McClure
North Carolina State University
P.O. Box 1095
Raleigh, NC 27695-7625, USA
Ph: 919-737-3847
SESSION 8; Analysis of imaging hardware. Discussion Leader.

Nathan T. Melamed
Westinghouse S.T.C.
1310 Beulah Rd.
Pittsburgh, PA 15235, USA
Ph: 412-256-1642
SESSION 2; Acousto-optic considerations and a mid-IR AOTF monitor.

Robert G. Messerschmidt
Connecticut Instrument Corporation
270 Main Avenue Norwalk, CT 06851, USA
Ph:
SESSION 0; New hammer for scientists: The past, present, and future of infrared micro-analysis.

Marc Meurens
University of Louvain
AGRO/BNUT PI. Croix du Sud, 3
B1348 Louvain-la-Neuve, BELGIUM
Ph: (32) 10 473726
SESSION 6; Comparison of diffuse reflectance and diffuse transmittance in NIRS.

Christopher Miles
National Aeronautics and Space Administration
Ames Research Center; Mail Stop 213-2
Moffett Field, CA 94035, USA
Ph: 415-694-4060
SESSION 9; NASA's medical and closed environment monitoring needs.

Charles E. Miller
Max-Planck-Institut fur Polymerforschung
Postfach 3148
D-6500 Mainz, FRG
Ph: (49) 613 1379248
SESSION 1; NIR diffuse reflectance analysis of synthetic polymers.

Jacques Moser
Swiss Federal Institute of Technology
ICP2, EPFL
CH-1015 Lausanne, SWITZERLAND
Ph: (41) 21 6935178
SESSION 4; Time-resolved diffuse reflectance UV-vis-NIR spectroscopy; application to photo-electrochemical systems.