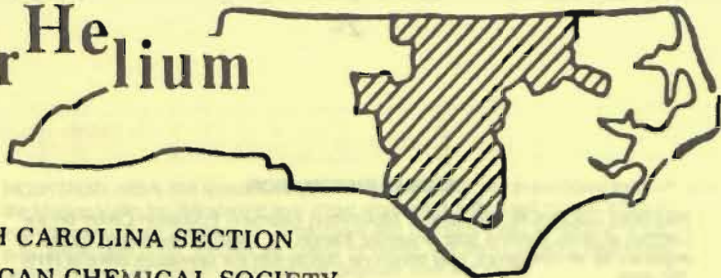


Tar Helium

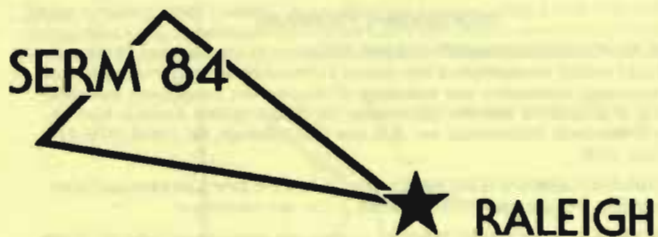


NORTH CAROLINA SECTION
AMERICAN CHEMICAL SOCIETY

Vol. 15, No. 2

October, 1984

**36th Southeastern Regional Meeting
American Chemical Society**



McKimmon Center
North Carolina State University
Raleigh, North Carolina

OCTOBER 24-26, 1984

**PREREGISTRATION DEADLINE
October 12, 1984**

GENERAL INFORMATION

MEETING LOCATION. The Jane S. McKimmon Extension Education Center on the Campus of North Carolina State University, Raleigh, NC. Anyone needing to contact a registrant for an emergency, may telephone directly into the operations office at (919) 737-3069.

AIR FARE AND CAR RENTAL SPECIALS. Eastern Airlines will provide either the lowest available fare (waiving minimum stay restrictions, saving over 50% from some cities) or a discount of 30% off the regular daycoach fare for the Eastern portion of round trip travel to Raleigh. IN ORDER TO OBTAIN THESE DISCOUNTS YOUR RESERVATION MUST BE MADE THROUGH EASTERN'S CONVENTION DESK (800) 327-1295 (in Florida (800) 432-1217) Monday - Friday 9 AM-8 PM Eastern Daylight Time. Please refer to EZ access number 10AP39 when making travel reservations. National Car Rental will offer a 15% discount off regular rates for any automobile rental for local use. Advance reservations may be made either through Eastern Airlines (above phone number) or directly with National (800) 227-7368.

LOCAL TRANSPORTATION. Shuttle buses will run daily between designated hotels and the meeting site.

HOUSING. The headquarters hotel is the Mission Valley Inn. Shuttle service will be provided from the Mission Valley Inn, the Hilton Inn, the Velvet Cloak, and the Happy Inn. The relative location of the hotels and center are shown on the attached map.

PROFESSIONAL PROGRAMS

CHEMICAL TOXICOLOGY SHORT COURSE. 8:00 am-5:15 pm, Tuesday, October 23, 1984. Topics include involvement of free radicals in chemical toxicology, mechanisms of metal toxicology, metabolism and toxicology of nitroaromatic compounds, metabolic activation of polynuclear aromatic carcinogens, etc. Course outline available from Ms. Kathryn E. MacLeod, Mallinckrodt, Inc., P.O. Box 17627, Raleigh, NC 27619, (919) 878-2825. Cost: \$100.

SYMPOSIA AND GENERAL SESSIONS. October 24-26 at the Jane S. McKimmon Center. Symposia titles and speakers listed elsewhere in this announcement.

MICROCOMPUTER SOFTWARE SESSION. Authors will demonstrate software developed for microcomputer applications in chemistry. Live demonstrations will be given on the APPLE II, IBM-PC, Commodore, Radio Shack, etc. computers.

SCIENTIFIC EXPOSITION. Over 60 exhibitors will be present from the opening of the meeting on Wednesday until noon on Friday. The exhibit hall is central to the meeting area.

HIGH SCHOOL CHEMISTRY TEACHER'S PROGRAM. Beginning at 10:00 a.m., Friday, October 26, 1984, lecture and laboratory demonstrations will be given. Following the Awards Luncheon, a workshop on safety in the high school laboratory will be conducted.

HIGH SCHOOL CHEMISTRY TEACHER AWARD LUNCHEON. Dr. Henry Bent, North Carolina State University, speaker. Friday, October 26, 1984 at the Jane S. McKimmon Center. Cost: \$5.00.

NORTH CAROLINA INSTITUTE OF CHEMISTRY LUNCHEON. Friday, October 26, 1984 at the Jane S. McKimmon Center. Cost: \$5.00.

There will be no employment clearing house.

SOCIAL EVENTS

MIXER. All registrants are invited to attend the Mixer which will be held in Room 2 of the McKimmon Center from 5:15 p.m. until 6:30 p.m. on Wednesday, October 24. Admission by registration badge only.

HOSPITALITY AREA. The spouse's hospitality area will be located in the board room of the Mission Valley Inn (Mezzanine level above registration desk). It will open at 9:00 a.m. each morning of the meeting. On Wednesday and Thursday it will be open until 5:00 p.m.; Friday until noon. Spouses are invited for coffee, soft drinks, pastries, information and assistance. All spouse's activities will originate from this room.

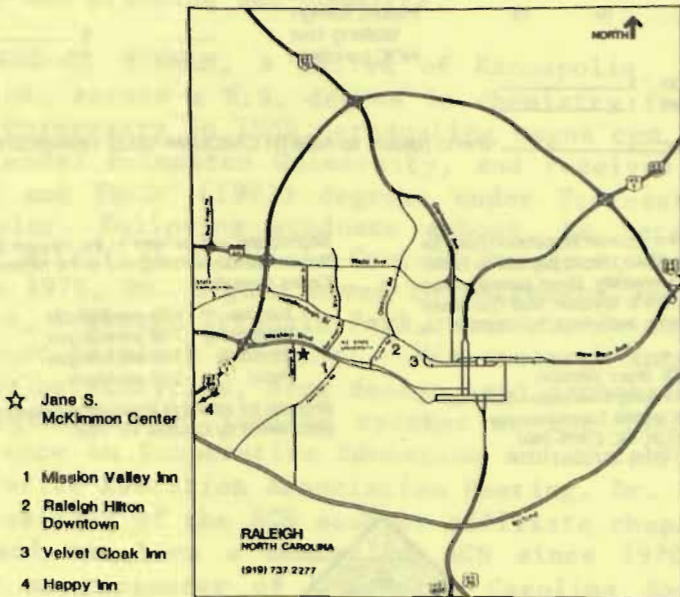
SPOUSE'S LUNCHEON. A spouse's luncheon will be held Wednesday at 11:30 a.m. in the Queen Anne Room of the Mission Valley Inn. Spouses will meet in the Hospitality Suite on the Mezzanine above the lobby at 11:30. Tickets: \$10.00.

ART MUSEUM TOURS. Two guided tours of the new facilities housing the North Carolina Art Museum are planned. Buses leave the Mission Valley Inn at 1:30 p.m., Wednesday following the spouse's luncheon and at 2:00 p.m., Thursday from the McKimmon Center. Tickets: \$5.00.

WALKING TOUR OF HISTORIC RALEIGH. Buses leave Mission Valley Inn at 10:00 a.m., Thursday for the Visitor Center. Following a slide show, the tour will take a leisurely walk to the Side Street Restaurant for a 11:00 am lunch (order from menu and pay individually). After lunch the tour will continue with the Governor's Mansion and the Museum of History. Buses return to the Mission Valley Inn at 3:00 p.m. Tickets: \$5.00.

UNC-PLANETARIUM TOUR. Bus leaves the Mission Valley Inn at 7:00 p.m., Thursday and returns at 10:00 p.m. Eat dinner before leaving. Tickets: \$10.00 (price includes admission to Planetarium).

DUKE CAMPUS AND CHAPEL. Buses leave the Mission Valley Inn at 9:00 a.m. on Friday. After a stop at the McKimmon Center buses will continue on to Durham for a bus tour of the Duke Campus and an organ recital at the magnificent Duke Chapel. Buses return at 12:30. Tickets: \$8.00.



BIOGRAPHICAL SKETCHES
OF CANDIDATES FOR 1985 ELECTION

FOR CHAIRMAN ELECT:

DR. WILLIAM L. SWITZER received his B.S. degree from Louisiana State University and his M.S. and Ph.D. degrees from the University of Illinois. After three years with Beckman Instrument, Inc., in California, he returned to academics at North Carolina State University where he now holds the rank of associate professor. Since arriving in North Carolina he has been active with the Local Section, serving on the hospitality and education committees. For 5 years he edited the TarHelium and also was the Local Section secretary for two years. Recently he has been active in planning the Southeastern Regional Meeting, serving on the Steering Committee as chairman of the publicity and printing sub-committee.

DR. ERIC C. BIGHAM, a native of Kannapolis, North Carolina, earned a B.S. degree in chemistry from NC State University in 1969, graduating magna cum laude. He attended Princeton University, and received M.A. (1971) and Ph.D. (1973) degrees under Professor E. C. Taylor. Following graduate school, he became a senior scientist at Pfizer Central Research, Groton, CT. In 1978, Dr. Bigham moved to Burroughs Wellcome Company, Research Triangle Park, where he is currently senior research scientist. His research interests include heterocycles, drug design, and carbohydrates. Dr. Bigham was an invited speaker at the 1982 ACS Conference on Cooperative Education and the 1983 NC Cooperative Education Association Meeting. Dr. Bigham was president of the ACS student affiliate chapter at NCSU and has been a member of ACS since 1970. He served as treasurer of the North Carolina Section from 1980 through 1984, and he is presently financial chairman of the 1984 Southeastern Regional ACS Meeting.

FOR TREASURER :

DR. WILLIAM E. HATFIELD received his B.S. degree (1958) and M.S. degree (1959) at Marshall University. In 1962, he completed his Ph.D. degree at the University of Arizona and went on to postdoctoral research at the University of Illinois (1962-63). Since 1963, Dr. Hatfield has taught at the University of North Carolina at Chapel Hill where he is now Professor of Chemistry. He is also Vice Chairman of the Department of Chemistry. He has over 250 publications to his credit, including two books for which he is co-author. From 1979 to 1981, Dr. Hatfield was the Chairman of the Awards Committee for the NC Section. Also, he has contributed to the ACS at the national level as a member of the Inorganic Examinations Committee (1965-72), Chairman of the Inorganic Examination Committee (1974-1982), member of the Examinations Committee (1977-present), Alternate Councilor for the Inorganic Division (1975-80).

CAROLYN CARTER FOUST received her associate degree in medical research technology in 1968 at the Duke University Medical School. Also, she earned an associate degree in business administration from Burlington Business College in 1965 and has participated in several continuing education courses. From 1966 to 1968, Ms. Foust was a medical research technician at Duke University Medical School. Since 1968, she has been employed as an assistant chemist at Research Triangle Institute in the Chemistry and Life Sciences Group. She has served the NC Section as Co-chairperson of the Safety Committee.

FOR COUNCILOR:

MAURICE M. BURSEY earned his B.A. (1959), M.A. (1960) and Ph.D. (1963), all in chemistry and all at the Johns Hopkins University, Baltimore. He is currently employed as Professor of Chemistry at the Uni-

MAURICE M. BURSEY (Continued):

versity of North Carolina at Chapel Hill. Also, during 1983-84 he has served as R. J. Reynolds Industries Professor of Chemistry for a period of leave. He has served the NC Section as Secretary/Treasurer, 1972; Chairman-Elect, 1974; Chairman, 1975; Councilor 1976-84; and numerous committee positions. Additionally he has served the Southeastern Region as Chairman of the Steering Committee (1980-81), Chairman-Elect (1979-80), Chairman of Committee to Redistrict Southeast (1982-84), and as a member of the Analytical Division Scientific Programs Committee (1982-85).

KATHRYN MACLEOD received her B.S.Ch. degree and M.S. from the University of South Carolina. She worked for ten and one-half years for the Environmental Protection Agency at Research Triangle Park. Since November of 1981, she has been employed by Mallinckrodt in Raleigh, NC. She has served on various Local Section committees. She was Secretary/Treasurer from 1977 to 1979 and Chairman in 1982, and Chairman of Special Programs for 1984 SERM.

FOR ALTERNATE COUNCILOR:

HALBERT CARMICHAEL, Professor of Chemistry at NCSU, was born in 1937. He received his B.S. degree at the University of Tennessee in 1959 and his Ph.D. degree at the University of California in 1963. He has been employed in the Department of Chemistry, North Carolina State University, since 1964. Dr. Carmichael has served as Secretary-Treasurer and Chairman of the North Carolina Section of the ACS and as Alternate Councilor. He is serving as arrangements and registration chairman for the 1984 Southeastern Regional Meeting of the American Chemical Society.

FOR ALTERNATE COUNCILOR (Continued):

DR. LEON RAND received his B.S. degree from Northeastern University and his Ph.D. degree from the University of Texas (Austin). He was a Post-doctoral Fellow at Purdue University (1958-59) and a faculty member of the Chemistry Department at the University of Detroit (1959-68); Chairman of the Chemistry Department (1968-73) and Dean of Graduate Studies and Research (1973-81) at Youngstown (Ohio) State University. Dr. Rand served as Chairman and Treasurer of the Detroit Section from 1962-65. He was elected Councilor from the Detroit Section, 1966-68, and from the Penn-Ohio Border Section, 1968-74. He was a member of the National Committee on Meetings and Expositions from 1967-74. He currently is Vice Chancellor for Academic Affairs at Pembroke State University.

UPCOMING SECTION MEETINGS

NOVEMBER:

Date: November 13, 1984
 Location: North Carolina Central University
 Speaker/
 Affiliation: Mr. John C. Pavlik, Fisher Scientific
 Topic: "Art and Alchemy"

DECEMBER:

Date: To Be Announced
 Location: Meredith
 Speaker/
 Affiliation: To Be Announced
 Topic: To Be Announced

WATERS BALLOT

Election of Officers for 1984

Please indicate your choice for each of the offices below in the space provided and mail ballots to:

Dr. Forest Getzen
Chemistry Department
NCSU
P.O. Box 8204
Raleigh, NC 28695-8204

Please sign the outside of your mailing envelope to validate your vote and print your name underneath legibly if there might be any misinterpretation of your signature. Ballots cannot be counted unless your membership can be verified and your signature is present on the envelope. Deadline for receipt of ballots is **Friday, November 2, 1984.**

| | |
|-------------------------|--|
| Chairman Elect: | _____ William L. Switzer NCSU |
| | _____ Eric C. Bigham Burroughs Wellcome |
| Treasurer: | _____ William E. Hatfield UNC-CH |
| | _____ Carolyn C. Foust RTI |
| Councilor | _____ Maurice M. Burse UNC-CH |
| | _____ Kathryn MacLeod Mallinckrodt |
| Alternate Councilor: | _____ Halbert Carmichael NCSU |
| | _____ Leon Rand Pembroke |

North Carolina Section
Fall Short Course

*** INTRODUCTORY DIGITAL ELECTRONICS ***

Dates: Monday and Tuesday, November 26 and 27, 1984
 Time: 9:00 a.m. to 4:30 p.m. each day
 Place: Burroughs Wellcome Auditorium
 3030 Cornwallis Rd.
 Research Triangle Park, NC
 Instructor: Dr. David F. Smith
 Burroughs Wellcome Co.
 919-248-4878

This course is intended for scientists who need to design simple digital logic circuits, especially interfaces between laboratory instruments and computers. Most new instruments provide some sort of "computer compatible" inputs and outputs, but attaching them to a computer is seldom as easy as stringing a cable from one box to another. Techniques such as gating, latching, multiplexing, and handshaking are often used to make data acquisition and control easier for the computer and to allow the programs to be written in a high level language such as BASIC.

No previous knowledge of digital electronics will be required or assumed. Familiarity with simple electronic components (resistors, capacitors, etc.) will be helpful. Programming examples will be given in BASIC.

Topics to be discussed:

- Logical operations and Boolean algebra
- Electrical properties of TTL circuits
- Examples of TTL circuits: gates, flip-flops, counters, etc.
- Digital-to-analog and analog-to-digital conversion
- Real-time programming considerations
- Applications: design and demonstration of interfaces for one or two laboratory instruments

Lectures will be interspersed with demonstrations, and plenty of time will be available for questions and discussion.

The instructor, David F. Smith, received his B.S. from Davidson College and his Ph.D. in Analytical Chemistry from UNC-CH, the latter in 1978 under Dr. Royce Murray. After teaching for two years at Carleton College in Northfield, Minnesota, he was lured back to North Carolina to become a member of the Automation Department at Burroughs Wellcome. In addition to microcomputer data acquisition and electronics, his interests include choral and instrumental music.

Enclosed is a check (payable to the North Carolina Section, American Chemical Society) as registration fee for "Introductory Digital Electronics," the NC Sections' fall short course to be held November 26 and 27 at Burroughs Wellcome.

| | |
|--|--|
| _____ \$75 non-members | _____ \$60 ACS members |
| _____ \$20 students, teachers, retired, post-doctoral | _____ No charge to unemployed ACS members |

Name: _____ Highest Degree: _____ Phone: _____

Business Address: _____

Send to: Dr. Eric Bigham, Burroughs Wellcome Company, 3030 Cornwallis Rd.,
 Research Triangle Park, NC 27709

If you have any questions concerning this short course, please call Dr. Todd A. Craig (549-2633).

HAS
ION-CHROMATOGRAPHY
BEEN "SUPPRESSED"
TOO LONG?

IS A
LIQUID CHROMATOGRAPH
AN ION-CHROMATOGRAPH?

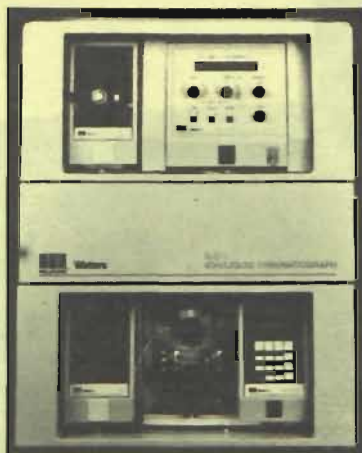
WATERS

ION/LIQUID CHROMATOGRAPH

brings you the latest in "non-suppressed"
ION - CHROMATOGRAPHY

UNMATCHED

- "Non-suppressed" single column technology
- Versatility through chemistry
- Sensitivity through
 - ✓ Proven trace enrichment techniques
 - ✓ Improved detector and electronics
- Automation where you want it
 - ✓ Sample handling
 - ✓ Instrumental operation
 - ✓ Data manipulation



CLIP AND MAIL TO WATERS AT THE ADDRESS BELOW

ATTN: Pete Talarico

- Please send information on Waters Ion/Liquid Chromatograph.
- Please have Technical Representative call me.

Name _____

Company/Institution _____

Department _____

Address _____

ZIP _____

() _____
Telephone

MILLIPORE

Waters Chromatography Division

Southeastern Regional Sales Office

117 Edinburgh South, Suite 206 / Cary, NC 27511

(919) 469-2501 or (800) 334-5167

TARHELIUM IS PUBLISHED BY THE NORTH CAROLINA SECTION OF THE AMERICAN CHEMICAL SOCIETY. THE VIEWS EXPRESSED HEREIN ARE NOT NECESSARILY THOSE OF THE SECTION. DIRECT ALL CORRESPONDENCE TO DR. WILLIAM F. GUTKNECHT, EDITOR, ENVIRONMENTAL CHEMISTRY DEPARTMENT, RESEARCH TRIANGLE INSTITUTE, P.O. BOX 12194, RESEARCH TRIANGLE PARK, N.C. 27709

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
RALEIGH, N. C.

PERMIT NO. 491

0137835L 09/84 ZL 426 1
DR ROBERT GEORGE GHIRARDELLI
US ARMY RES OFFICE
POB 12211
RES TRIANGLE PARK NC 27709

EXECUTIVE COMMITTEE

Bernard Spielvogel (*ARO*), Chairman
Robert Izydore (*NCCU*), Chairman Elect
Lynn Wright (*EPA*), Secretary
Eric Bigham (*BW*), Treasurer
William Gutknecht (*RTI*), Editor
Maurice Bursey (*UNC*), Councilor
Marcus Hobbs (*Duke*), Councilor
Ernest Eitel (*UNC*), Councilor
Colin Pitt (*RTI*), Alternate Councilor
Peter Smith (*Duke*), Alternate Councilor
William Gutknecht (*RTI*), Alternate Councilor
William Gutknecht (*RTI*), Past Chairman
Kathryn MacLeod (*Mallinckrodt*), Past Chairman
Louis Quin (*Duke*), Past Chairman