



# 27 CODATA / NEWSLETTER

January 1984

## CODATA Multisatellite Thematic Mapping Mission to Tanzania

Three sets of satellite data are being used to map Tanzania: METEOSTAT, TIROS N, and LANDSAT. A prime objective of the multisatellite mapping is the update of population density maps showing the types of cultivation and vegetation extant. Sample zones were chosen with this objective in mind. The regions include: tea and coffee plantations; the perimeters of forest cultivation; plantations of sugar cane, cotton, and rice; heavily deforested zones to be used for crop cultivation; and zones affected by forest fires.

A second objective is to make an inventory of the land systems, in particular, the relationship between geomorphological elements and the ecosystems. Types of countryside were selected according to the main types of vegetation, the soil types, and the geographical units. Samples were taken for analyses of exposed rocks (mainly granites, gneiss, and acid volcanic rocks). The land control was done in order to prepare an interpretation grill for the multispectral signatures of the objects teledetected, taking into account the spatial and spectral resolutions of the three satellites.

A Tanzanian expert is being trained in the handling of the numerical satellite data to facilitate the work of the research team.

## CODATA Personalities ...in the News

HEINRICH BEHRENS, Fachinformationszentrum, Energie, Mathematik, Physik, GmbH at Karlsruhe, F.R.G., is the head of the Heat Pump Center founded in December of 1982 with the cooperation of 5 European countries and the U.S.A. under the auspices of the International Energy Agency (IEA) organized by industrialized countries in 1974.

DAVID GARVIN, National Bureau of Standards, Gaithersburg, MD, U.S.A., was recognized for "contributions in chemical kinetic and thermodynamic data evaluation" by award of a Department of Commerce gold medal.

Dr. MERRILL L. MINGES of Wright Aeronautical Laboratories and Dr. HOWARD J. WHITE, JR. of the National Bureau of Standards won Thermal Conductivity Awards at the biennial International Thermal Conductivity Conference at Rapid City, South Dakota, October, 1983.

The Committee on Data for Science and Technology (CODATA) was established in 1966 by the International Council of Scientific Unions.

Working on an international, interdisciplinary basis, CODATA seeks to improve the quality, reliability, and accessibility of data of importance to science and technology.

## Symposium on Critical Evaluation and Prediction of Phase Equilibrium in Multicomponent Systems

This English-language symposium to be held near Warsaw, Poland from May 9 to 12, 1984, is organized by CODATA's Task Group on Critically Evaluated Phase Equilibria in Mixtures together with the Institute of Physical Chemistry of the Polish Academy of Sciences. Professor A. Bylicki is Task Group Chairman.

The Symposium is intended to facilitate discussion of recent research results and the selection of recommended methods for critical evaluation and prediction.

Separate sessions are planned to treat the following subjects:

- Statistical and numerical fundamentals of the correlation of phase equilibrium data,
- Procedures for estimation of experimental errors,
- Simultaneous correlations of various thermodynamic data, and
- Comparison of various methods of prediction and correlation of phase equilibria in multicomponent systems.

Queries and correspondence should be sent to the symposium organizer: Dr. A. Maczynski, Instytut Chemii Fizycznej PAN, Kasprzaka 44/52, 01-224 Warsaw, Poland.



## Nutritional Science Links

Links have been established between the International Union of Nutritional Science (IUNS) Committee VI/4 on Optimal Utilization of Available Feed Resources and CODATA by the appointment of H. Haendler, the IUNS representative on CODATA, to membership on Committee VI/4 and by extending the charge of the Committee to include broadening "the knowledge about available feedstuffs" and encouraging "efforts to determine, collect, store and disseminate numerical and factual data concerning their composition, nutritive value and use." H. Haendler presented a paper on "The accessibility of nutritional data - necessity and realization" at the 8th International CODATA Conference held in October 1982 at Jachankra, Poland. Links on the composition of feedstuffs have also been established between the International Network of Feed Information Centers (INFIC) and IUNS by the direct involvement of C.C. Balch (Co-coordinator of IUNS Commission VI) and H. Haendler in the work of INFIC. C.C. Balch prepared a paper on "The International Network of Feed Information Centres: Past, Present and Future" for presentation at an INFIC meeting and symposium in Sydney, Australia, in August 1983. This paper contains discussion on the extension of the INFIC system to human foods as well as animal feedingstuffs and the involvement of both IUNS and CODATA in this work.

The CODATA Directory Chapter editorship on Nutrition has also recently been assumed by Professor Haendler.

## Online Databases Record

### Largest-Ever Jump

The latest issue of the Cuadra Directory of Online Databases, distributed in early November, lists a record increase in the number of new online databases to a total of 1878, up from 1596 six months earlier. According to Dr. Carlos A. Cuadra, publisher of the Directory, this is the largest recorded increase in any six-month period.

The number of vendors of online services also continues to increase, although at a somewhat slower rate. Listed are 272 such vendors, up from 244 six months ago. It also lists 927 database producers, up from 820 six months earlier.

## Course on Data Handling

### in Astronomy and Astrophysics

This course under the auspices of the Working Group of Astronomical Data of the International Astronomical Union, CODATA, and other international organizations is to be held at the International Center for Theoretical Physics at Miramare, Trieste, Italy from 9-13, July 1984. It is designed for professional astronomers, young astronomers, and interested scientists. In recognition of the enhanced importance of databases and networks in astronomy and space astronomy, such topics as data bank management, astronomical catalogs, information standards and transfer systems, extraction methods for observational data, and data handling in other sciences will be treated. Dr. B. Hauck and G. Sedmak are Co-directors.

Further information may be obtained from: Mrs. Luciana Balestrucci, DHC/84 Course Secretary, Osservatorio Astronomico di Trieste, C.P. Succursale Trieste 5, Via G.B. Tiepolo 11, 34131 Trieste, ITALY. Telex: 460014 FISICA I; Phone: 40-793921.

## Lectures on Numerical and Factual Databases

CODATA-related individuals Drs. M. Chase, D.R. Lide, Jr., R.F. Taschek, D.G. Watson, and J.H. Westbrook were joined by Drs. A.J. Barrett and J. Sutton (London, U.K.) in two-day presentations under the auspices of NATO-AGARD (Advisory Group for Aerospace Research and Development) on the development and use of numerical and factual databases in early October at Gaithersburg, MD, U.S.A, London, U.K., and Lisbon, Portugal.

The scope of the lecture series included generation of numerical data, consideration of data quality and reliability, methods for publishing and disseminating data, review of databases currently available, how these databases can be used, and future needs for numerical databases. Two round-table discussions at the end of the presentations considered the critical importance of data and information to international and national well-being as well as data in the AGARD complex and NATO. More than 400 information and data handling persons participated in the three sessions. Printed versions of the lectures presented at the meeting are provided in AGARD Lecture Series No. 130 (see Book Section).

## Peer-Review for Toxicology Databank

Toxicology Data Bank (TDB) is a user-oriented, online, interactive computer-based data file. The data are compiled at Oak Ridge National Laboratory. The project is managed at the National Library of Medicine (NLM). Henry M. Kissman, one of the directors, has noted that this is the only peer-reviewed public database giving general toxicological information on chemicals. Initiated about 1974, it came on line in 1978 with about 1000 chemicals and is gradually becoming better known. It is "probably not used as much as it ought to be." It seems to have very little "competition" at home or abroad.

A review group of experts — 14 academic scientists — uses a procedure similar to a grant reviewing process to evaluate the data on a chemical. The building of the databank involves not only review, but incrementation with their own knowledge. Although TDB peer review takes place around a conference table at present, in the near future, computerized conferencing procedures involving online computers are to be explored. The statements entered would be displayed at the university offices of the members who could see, comment on, and revise the online statements until a consensus was reached. Although much of the data do come through the already "filtered" tertiary literature sources, primary sources are increasingly being used to speed the accession and updating procedures.

The data bank is now used abroad as well as in the U.S.A. Moving to micro-computer access in the near future will help to make it more user-friendly.

## Phase Equilibrium in Mixtures

### Directory Query

The CODATA Task Group on Phase Equilibria in Mixtures is preparing a directory of groups that are active in the correlation and evaluation of phase equilibria and related thermodynamic property data on organic mixtures. Questionnaires are being disseminated to ascertain the detailed interests and scope of work of such groups. Anyone interested in responding to this questionnaire is invited to contact:

CODATA Secretariat  
51 Boulevard de Montmorency  
75016 Paris, France

## International Sulphur Unit

### SCOPE/UNEP

Biogeochemical cycles are important to all of us and to SCOPE as well. SCOPE Report 19, "The Global Biogeochemical Sulphur Cycle" (1983), presents primary information on the sulfur content of various reservoirs and geospheres and assessments of the magnitude of fluxes from reservoir to reservoir or geosphere to geosphere by different approaches to obtain reliable figures. It documents the background emissions and assesses the importance of anthropogenic emissions, discusses the effect of changes in the sulfur cycle on the cycle of other important elements, and shows how sulfur affects the availability of oxygen for living organisms in water bodies.

The output of elemental sulfur, pyrite, and gaseous sulfur as well as the production of sulfuric acid in the environment are likely to increase by at least 30 per cent by 1985, and, thus, the pollution of soil, drainage water, and river water will increase tremendously and affect currently unpolluted regions of the globe. The considerable increases in coal consumption that are being projected suggest that there will be increased pollution of the earth by sulfur dioxide in the near future.

The next workshop dealing with the evolution of the global sulfur cycle will be held in northwest U.S.S.R. in September 1984.

### COGEODATA-W. G. on

#### Computer Oriented-Infotech

Headed by Norwegian S.W. Bie, the Working Group on Assessment of Computer-Oriented Information Technology will devote an increasing fraction of its endeavors to survey and disseminate information on the current and possible use of micro-computer technology in the geological sciences. These single-station computer systems that provide low-cost data-processing capability, with hardware and software features normally found only on larger computer systems, will in the coming years have a major impact upon geological data collection, handling, and interpretation both within small geological institutions and in larger distributed processing environments of many national geological surveys. Moreover, the Working Group will arrange or participate in state-of-the-art seminars on computer-oriented information technology.

## International Endeavor in Chemical Science

The International Organization for Chemical Sciences in Development (IOCD) was founded in July 1981 primarily to involve chemists from Third World nations in the search for solutions to the urgent problems of their countries. Essentially three channels—initiation of research programs, provision of services, and improvement of education in the chemical sciences—are used in the IOCD. Because scientists from industrial countries will serve as scientific advisers and monitor IOCD research projects, technology transfer and the strengthening of institutions in the Third World countries will also be facilitated. The IOCD has already made an impressive start in accomplishing some of its objectives in the brief period since its founding under the direction of its president, Nobel Laureate Glenn T. Seaborg (Lawrence Berkeley Laboratory).

### Proposed Study of Global

#### Change - IGBP

The International Council of Scientific Unions (ICSU) is considering proposals for an international, interdisciplinary Geosphere-Biosphere Programme (IGBP) to study global change in the terrestrial environment and the life that inhabits it as a closely coupled system. The system is constantly undergoing change on time scales that range from hundreds of millions of years through the slow recurrence of ice ages to transient phenomena. Changes in the geosphere that embrace the land, oceans, atmosphere, and the solar terrestrial domain, and in the terrestrial and marine biosphere arise from the interplay of physical, chemical, and biological processes.

Over millions of years these natural changes have resulted in the evolution of delicately balanced ecosystems that constitute the global life support system.

A central intellectual challenge of the next few decades is to deepen and strengthen our understanding of the complex, subtle, and often synergistic interactions between the several parts of the geosphere and biosphere. This knowledge base underpins societal management of our global life support system to enhance biological productivity and to respond to the increasing needs of a growing population.

The first in-depth discussion of this programme is planned at a scientific symposium on global change to be held in Ottawa, Canada, 25 September 1984 during the General Assembly of ICSU. Dr. Thomas F. Malone (Unit 203, 5 Bishop Road, West Hartford, Connecticut 06119, U.S.A.) and Dr. Juan Roederer (Director, Geophysical Institute, University of Alaska, C.T. Elvey Building, Fairbanks, Alaska 99701, U.S.A.) have been designated as convenors of this Symposium and may be contacted directly.

### Education on Data

The Education Panel of the Numerical Data Advisory Board (NDAB), a group informally closely coupled with USNC-CODATA, has initiated plans to test the utility and efficiency (i.e., the "user-friendliness") of selected CODATA guides for the presentation of data in the preparation of theses. They encouraged the creation of articles for a broad spectrum of readers in personal computer magazines and in journals in order to reach teachers of pre-professional youth. In addition, generation of college- and professional-level educational modules to:

- teach data-handling skills,
- be compatible with other modules,
- to create custom courses, and
- be updated in response to both new information and new instructional insights

is planned.

Although such modules would be available in printed versions, they should have audiovisual, laboratory, and computer components as well as menu-selectable versions or examples for different disciplines which have been subjected to peer review and field testing. Such modules are eventually expected to cover reduction, presentation, evaluation, dissemination, management, retrieval, and intelligent use of data. Evaluative workshops would provide feedback on the acceptability of the modules.

Short courses on the treatment of data need to be reinitiated as does the generation of documents on "How to Do Science" to instill an appreciation for the careful collection and evaluation of data. Moreover, data-conscious scientists are to be encouraged to visit secondary schools to convey the excitement of discovery and the discipline necessary for proper gathering of data. To facilitate this endeavor, supportive and anecdotal materials are being collected by the Panel.



## Computerized Databases

An advisory committee has been established to examine all aspects of IUPAC creation of numeric databases to provide ready access to the considerable amount of IUPAC-critically evaluated data which now ultimately appears as printed copy. The committee will also consult with the presidents of IUPAC's seven scientific divisions (analytical, applied, clinical, inorganic, macromolecular, organic, and physical chemistry) and recommend appropriate action. Valentine A. Kopyug, President of the Siberian Division of the U.S.S.R. Academy of Sciences and David R. Lide, Jr. of the Office of Scientific Reference Data at the U.S. National Bureau of Standards are among the many members of this committee.

CODATA is one of the several bodies experienced in computerizations and management of databases which have agreed to share their experience with the committee.

International Symposium on  
Spatial Data Handling

The computer-based handling of spatial data forms a common bond between researchers in a number of different disciplines. Geographers, cartographers, geologists, oceanographers, computer scientists, and others are all called upon at one time or another to manipulate and display large data sets containing explicit coordinate information. Some common areas of concern include: efficient encoding of spatial data (e.g., digitizing), development of effective data structures and algorithms, management of very large spatial data bases, creation of effective displays of complex space/time data sets, and efficient design of operational, spatial data handling systems. This multi-disciplinary symposium, August 20-24, 1984, at Zurich, Switzerland, sponsored by the Commission on Geographical Data Sensing and Processing of the International Geographical Union, will bring together researchers with a common interest in spatial data handling.

Inquiries should be directed to: Professor Duane F. Marble, Department of Geography, State University of New York at Buffalo, Amherst, New York 14260, U.S.A. Telephone: (716) 636-2264.

## Now Online

After nearly three years of development and testing, the thermodynamics module of the Chemical Information System is ready for user access. This permits the recovery of certain thermodynamic property values by means of a computer terminal connected to the Telenet or Tymnet system. THERMO contains two sets of data. One is equivalent to "The NBS Tables of Chemical Thermodynamic Properties of Selected Values for Inorganic and C<sub>1</sub> and C<sub>2</sub> Organic Substances in SI Units," *J. Phys. Chem. Ref. Data* Vol. II, Suppl. No. 2, 1982. The other consists of data on several properties of organic compounds being supplied by the Thermodynamics Research Center.

CIS also contains several other chemical databases. Additional information can be obtained from Computer Sciences Corporation, P.O. Box 2227, Falls Church, VA 22042, U.S.A.

Likelihood of Future Database  
Downloading Cited

Downloading has not only begun: it is here to stay. That is one of the major messages given to both the users and suppliers of online database services at the Information Industry Association (IIA) Annual Meeting held in New York in November 1983. The finding was reported to the IIA by Judith Wanger, Vice President of Cuadra Associates, which has just completed a comprehensive multiclient study: Down-loading Online Databases: Policy and Pricing Strategies.

"Downloading," Miss Wanger said, "is the process by which users of online databases capture and store the results of online inquiries (e.g., citations, the full text of items, time series, or data items) in local computer storage—either temporarily or permanently, for further computer-based manipulation or re-use of the data." Although it is not an entirely new phenomenon, downloading has become a matter of growing concern in the online database industry, in large part because of the microcomputer revolution, which has made it technically and economically more feasible to capture and store the results of online inquiries.

## BRIEFS Link

West Germany's Fachinformationszentrum Energie, Physik, Mathematik GmbH (FIZ Karlsruhe, F.R.G.) and the ACS Chemical Abstracts Service (Columbus, Ohio) are linking their online computer information services in an international scientific and technical information network. The two-computer system uses the same command language for searching information files at both locations. This enables transatlantic usage of either base. CAS ONLINE is now accessible and Physics Briefs will be searchable through Columbus by mid-1984. Additional databases offered by FIZ Karlsruhe will become accessible through the Columbus node during 1984. A full networking arrangement, with automatic switching between computers, is expected to be in place in 1985.

FIZ Karlsruhe and other German database producers and suppliers currently maintain more than 40 databases online at Karlsruhe, including Mathematics Abstracts file; the C13NMR file on nuclear magnetic resonance spectra; the DECHEMA Chemical engineering file; the INSPEC file on physics, electrical engineering, electronics, computers and control; the INIS nuclear research and technology file; the COMPENDEX engineering file; and NTIS databases.

CAS ONLINE currently provides searches of structure records for more than 6 million chemical substances. CAS will add its data base of bibliographic references and index terms for over 6 million chemical papers and patents published since 1967 to the CAS ONLINE service late this year and expects to load at least one additional database in Columbus during 1984.

## The Atomic Data Bank

The Atomic Data Bank, started three years ago, currently holds information on: electron excitation cross sections and rates for 2000 transitions, photoionization cross sections for 29 transitions, electron ionization cross sections and rates for 36 ions, and optical oscillator strengths for 1,000,000 transitions.

An index of the data bank can be obtained from Dr. K.A. Berrington, Dept. of Applied Mathematics and Theoretical Physics, The Queen's University of Belfast, Belfast BT7 1NN, Northern Ireland.

## CODATA Bulletins

- **Guide for the Preparation of Thermodynamic Tables and Correlations of the Fluid State.** Selby Angus, Bulletin No. 51 (Dec. 1983).<sup>a</sup>
- **Directory Chapter 10: Geodesy.** Michel Louis, Chapter Editor, Bulletin 52 (Jan. 1984).<sup>b</sup>
- **Directory Chapter 9: Snow and Ice.** Roger M. Barry, Chapter Editor, Bulletin 53 (Feb. 1984).<sup>b</sup>
- **Directory Chapter 11: Chemical Thermodynamics.** Robert D. Freeman, Chapter Editor, Bulletin 54 (Mar. 1984).<sup>b</sup>

## CODATA Special Reports

- **Report on the CODATA Planning Conference** (June 1983) No. 10.<sup>c</sup>

## CODATA Books

- **Database Management in Science and Technology. A CODATA Sourcebook on the Use of Computers in Data Activities.** John R. Rumble, Jr. and Viktor E. Hampel, Editors (in press).<sup>d</sup>
- **Method for Coding Data on Microbial Strains for Computer.** M. Rogosa, I. Krichevsky, and R.R. Colwell (in press).<sup>e</sup>

## Books for the Bookshelf.....\*

- **Development and Use of Numerical and Factual Data Bases.** AGARD Lecture Series No. 130.<sup>f</sup>
- **International Scientific Cooperation and its Effects on Society.** György Darvas, Editor.<sup>g</sup>
- **Clustering of Large Data Sets.** J. Zupan.<sup>h</sup>
- **Network Architectures for Distributed Computing.** E.A. Yakubaitis.<sup>i</sup>
- **Standardization of Technical Terminology: Principles and Practices.** C.G. Interrante and F.J. Heymann, Editors.<sup>j</sup>
- **A Brief Guide to Sources of Scientific and Technical Information.** Saul Herner, Herner and Co., 2nd edition.<sup>k</sup>
- **Telecommunications Systems and Services Directory.** First Edition. John Schmittroth, Jr. and Martin Connors, Editors, 1983.<sup>l</sup>
- **Plant Description Modules: An Aid to the Compilation, Storage, and Retrieval of Tabular Descriptions of the Qualities of Plant Species.** Clive Hackett.<sup>m</sup>

- **Thermophysical Properties of Matter. Vol. 17, Thermal Conductivity.** J.G. Hust, Editor.<sup>n</sup>
- **Titanium: Physico-chemical Properties of Its Compounds and Alloys.** Atomic Energy Review: Special Issue No. 9, K.L. Komarek, Editor.<sup>o</sup>
- **The Infrared Spectra Handbook of Common Organic Solvents.**<sup>p</sup>
- **Infrared Spectra of Steroids, Volume 4.**<sup>q</sup>
- **Standard Infrared Vapor Phase Spectra, Volume 20.**<sup>r</sup>
- **Infrared Spectra of Prepared and Prescription Drugs, Third Volume.**<sup>r</sup>
- **Computer Applications in Petroleum Geology. Computer Methods in the Geosciences.** Joseph E. Robinson.<sup>s</sup>
- **Quantities and Units of Measurement, A Dictionary and Handbook.** J.V. Drazil.<sup>t</sup>
- **Handbooks and Tables in Science and Technology, Second Edition.** Russell H. Powell, Editor.<sup>u</sup>

\*Further details on content, identification, price, source, etc. for above items (if available) are referenced below.

a. CODATA Bulletin. Subscriptions: Regular, US \$45; Personal, US \$15. Individual copies available for US \$10. Pergamon Press, Ltd., Headington Hill Hall, Oxford, United Kingdom OX3 0BW.

b. Individual copies available for US \$10 from Pergamon Press, Ltd., Headington Hill Hall, Oxford, United Kingdom OX3 0BW.

c. Available on request from CODATA Secretariat.

d. In press, expected April 1984 from North Holland Publishing Co., Amsterdam.

e. In press, expected July 1984 from Springer-Verlag, New York.

f. (AGARD-LS-130) (Oct. 1983). Available from AGARD National Distribution Letters or NTIS in U.S.A. ISBN 92-835-1459-9.

g. Full information on a topical symposium held in Hungary under the auspices of the organizations below to discuss the major societal problems and implications of international scientific cooperation. It discusses both positive experiences and constraints and formulates general opinions, views, and recommendations for improving the social effectiveness of such ventures. (1983). US \$21. Published jointly by the Institute for Research Organization of the Hungarian Academy of Sciences and Unesco at Budapest.

h. Zupan is from the Institute of Chemistry 'Boris Kidric', Ljubljana, Yugoslavia. The book is an automatic computer-based classification of great masses of chemical data. (August 1982). 140 pp. US \$29.95. ISBN: 0471-10455-8.

i. Translated from the Russian. (Spring 1983). US \$32.50. Allerton Press, New York.

j. This publication was developed to promote improvements in terminology used in technical standards and to foster communications among workers at various levels

who develop and use technical terms. (Sept. 1983). 146 pp. Hard Cover. US \$24 list. ASTM, 1916 Race Street, Philadelphia, PA 19103; ATTN: Sales Service Department; 215-299-5585; TELEX: 710-670-1037. PCN: 04-806000-42.

k. A handbook delineating and describing the most efficient means of seeking and identifying useful information sources, regardless of the subjects involved or the reader's previous experience with information tools and techniques. (June 1980). 171 pp. US \$15 + \$2.10. Information Resources Press, 1700 North Moore Street, Suite 700, Arlington, VA 22209. ISBN 0-87815-031-5. LC No. 80-81087.

l. Cumulative Master Index, Function/Service Index, Geographic Index, and Personal Name Index within each issue. (Issue No. 1, July 1983). About 250 pp. and 500 organization and glossary entries in each part. Softbound. Three-issue subscription, US \$150. (Issue No. 1 now available; remaining issues at six-month intervals.) Gale Research Co., Book Tower, Detroit, MI 48226. ISBN 0-8103-1696-X.

m. This report addresses the problem of achieving compatibility between the content of plant databases constructed by different groups of workers. Divisional report (CSIRO-Commonwealth Scientific and Industrial Research Organization. Division of Water and Land Resources), G.P.O. Box 1666, Canberra, A.C.T. Australia 2601. ISBN 0-643-03555-9.

n. Proceedings of conference. Standard reference materials, data correlation. (1983). 812 pp. Plenum. US \$110. ISBN 41177-6.

o. This book, the ninth and last monograph in the Atomic Energy Review series on the physico-chemical properties of the compounds and alloys of metals of interest to reactor engineers, deals with titanium. These special issues are

concerned with the critical evaluation and documentation of the following data: thermodynamic properties, densities, crystallographic structures, equilibrium diagrams, and diffusion rates in the condensed states. (July 1983). Austrian schillings 900. International Atomic Energy Agency, Division of Publications, P.O. Box 100, A-1400 Vienna, Austria.

p. US \$295.00. (1983). Sadtler Research Laboratories, 3316 Spring Garden Street, Philadelphia, PA 19104.

q. Included are: saturated and unsaturated hydrocarbons, alcohols (primary, secondary, and tertiary), ketones, carboxylic acids, and their derivatives as well as carbohydrate derivatives. Sadtler Research Laboratories, 3316 Spring Garden Street, Philadelphia, PA 19104.

r. Sadtler Research Laboratories, 3316 Spring Garden Street, Philadelphia, PA 19104.

s. Hutchinson Ross. (1982). 164 pp., \$26.95 (C); \$16.95 (P). Available from Van Nostrand Reinhold.

t. This volume incorporates an alphabetical listing of the names of all SI and other commonly used units (and combinations of units), giving their usage, standard abbreviations, and conversion factors. It has a dictionary of the quantities and constants met in all branches of science and technology. Each entry gives the definition, standard symbol, French and German equivalents, the dimensions and SI units of measurement. Additionally, there is a list of the symbols used to denote quantities and constants. (1983). 20 x 13.5 cm, 320 pp., casebound. £12.50. Mansell Publishing Ltd, 6 All Saints Street, London, United Kingdom N1 9RL. ISBN 0-7201-1665-1.

u. (1983). 384 pp., Clothbound. US \$55. ISBN 0-89774-039-4. LC 83-19842.



## ICSU AB Eyes Numeric

### and Factual Data

The Abstracting Board — having recognized that recent technological developments in information transfer results in:

- an increasing importance of scientific information for the working scientist's day-to-day life;
- a blurring of the distinction between primary, secondary, and tertiary information forms; and
- a closer interaction between producers and users of information —

appreciated the increasing need for numeric and factual data. They further noted that the producers of bibliographic databases have begun collection and dissemination of non-bibliographic data.

The Board, in reaffirmation of its strong support for activities closely related to the interests of the scientific unions, set up an ad hoc task force to study its future objectives, missions, and programs, followed by three task groups to prepare recommendations on programs, membership, and statutes.

**CODATA Secretariat**  
51 Boulevard de Montmorency  
75016 Paris, France

***Here is CODATA's latest Newsletter for***

## Ninth International CODATA Conference

**Jerusalem, 24-28 June 1984**

The Conference covers major topics in broad disciplinary or interdisciplinary sessions with invited and contributed papers and posters on:

- Scientific data consolidation and processing,
- Technology and management of computerized databases,
- Computerized data and systems analysis,
- Information systems in materials science technology and engineering,
- Bioscience numerical information processing, and
- Geoscience numerical information processing.

Moreover, 27 specialized symposia of invited presentations organized by experts on well-framed topics or particular subdisciplines and panel discussions on selected topics are incorporated.

Among the plenary lecturers are: J. Crease (Surrey), F.P. Agterberg (Ottawa), G. Dathe (Dusseldorf), A. Lerner (Moscow), and E.A. Kabat (New York).

Diversified social and touristic programs available for participants and and/or accompanying persons.

Information and details may be obtained from: Professor A.S. Kertes, Institute of Chemistry, The Hebrew University, Jerusalem, 91904, Israel. Telephone: 972 2 585 354; Telex: 25391 HU IL

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