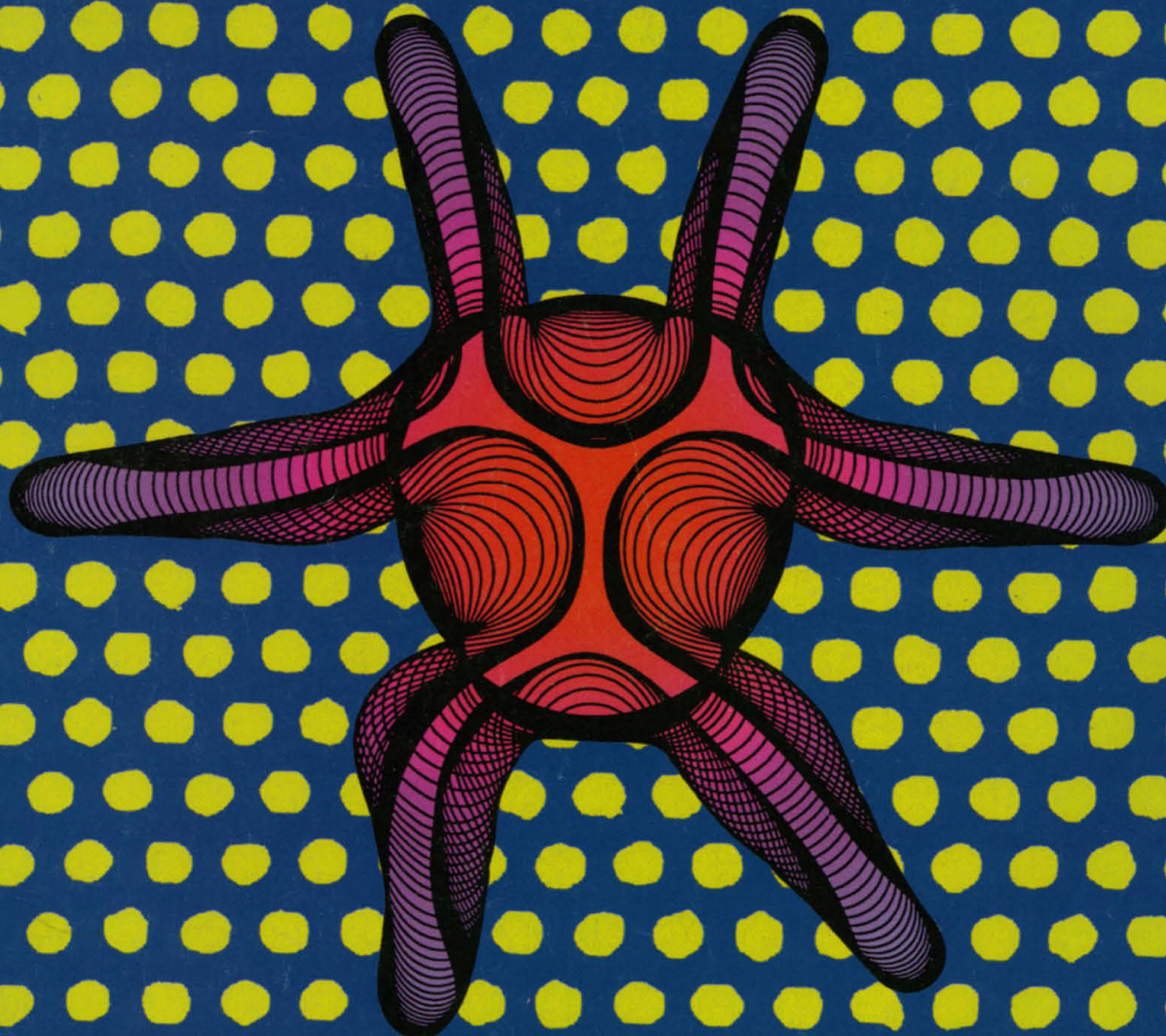


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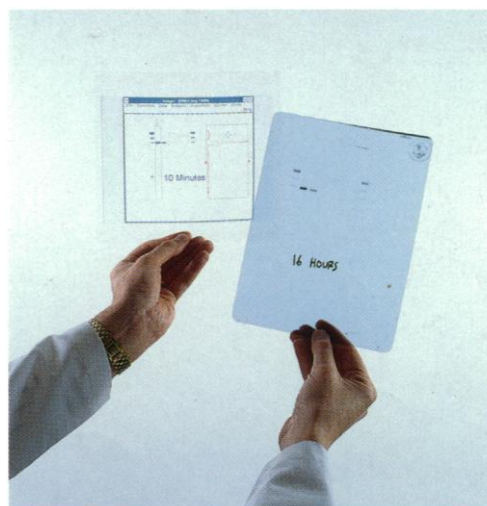
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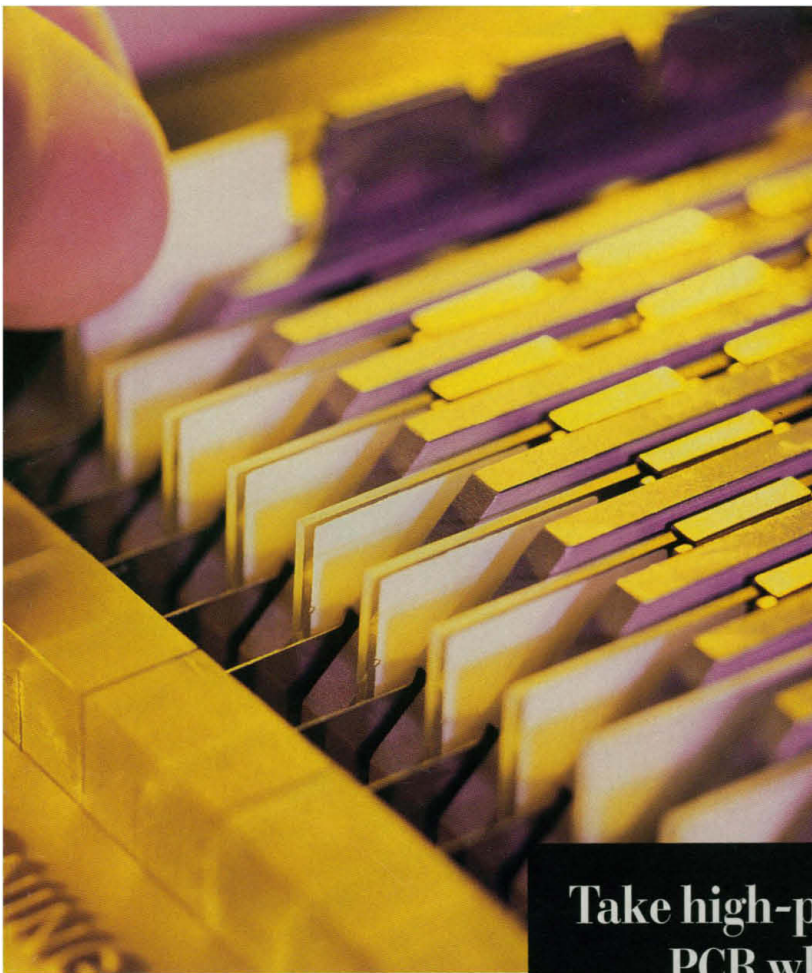
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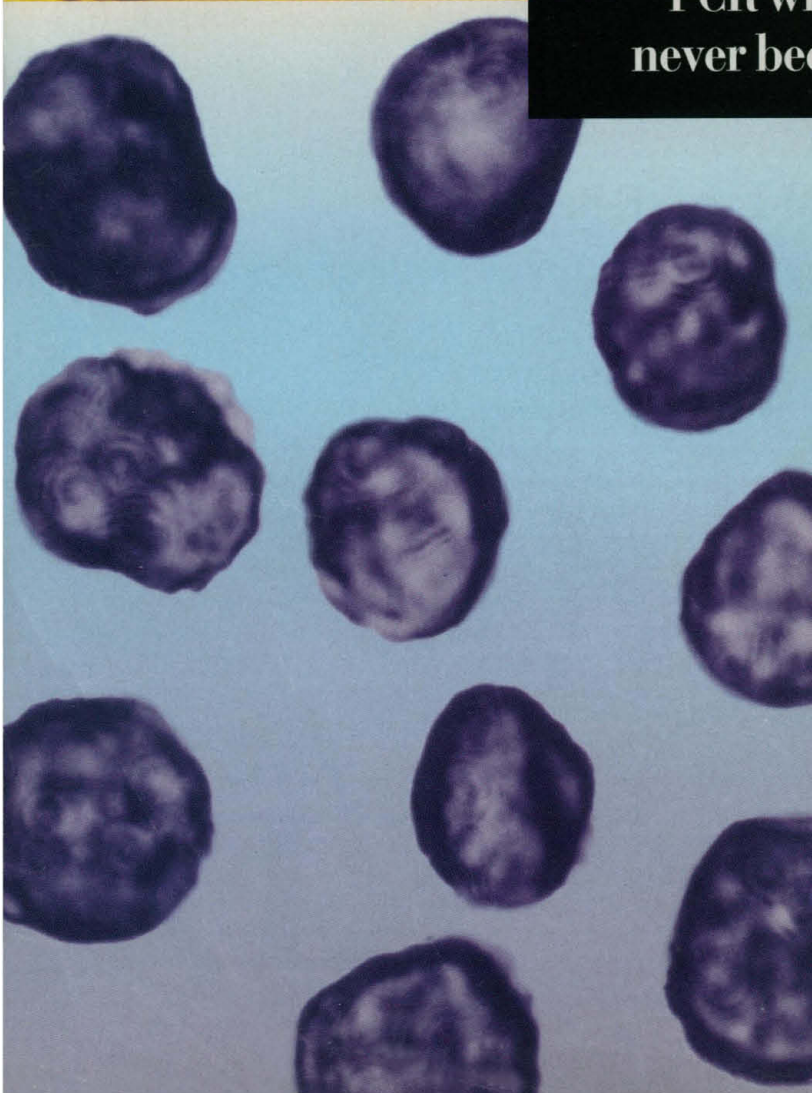
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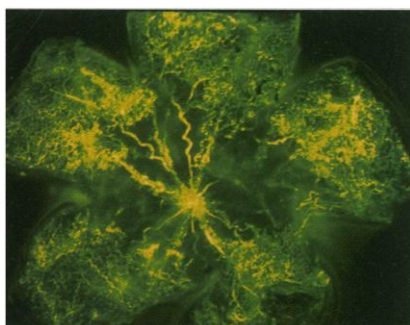
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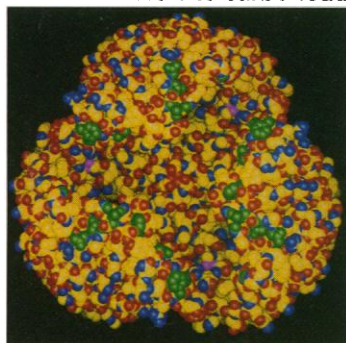




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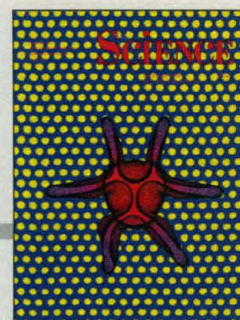
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## COVER

Collage of domain shapes and patterns. The foreground figure illustrates a magnetic field-induced branching instability of a droplet in a thin layer of ferrofluid. The color graduation illustrates the evolution of the droplet's shape, and contours of successive intermediate states are superimposed. The background shows an ordered

"bubble" domain pattern, recorded in a thin magnetic garnet film in the presence of a small magnetic field. See page 476. [Illustration: M. Seul and S. Cullerton. Foreground adapted from computer simulations of D. P. Jackson, R. E. Goldstein, and A. O. Cebers]



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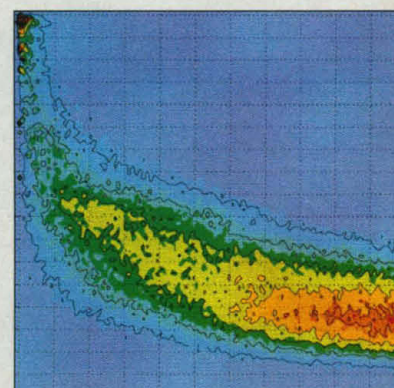
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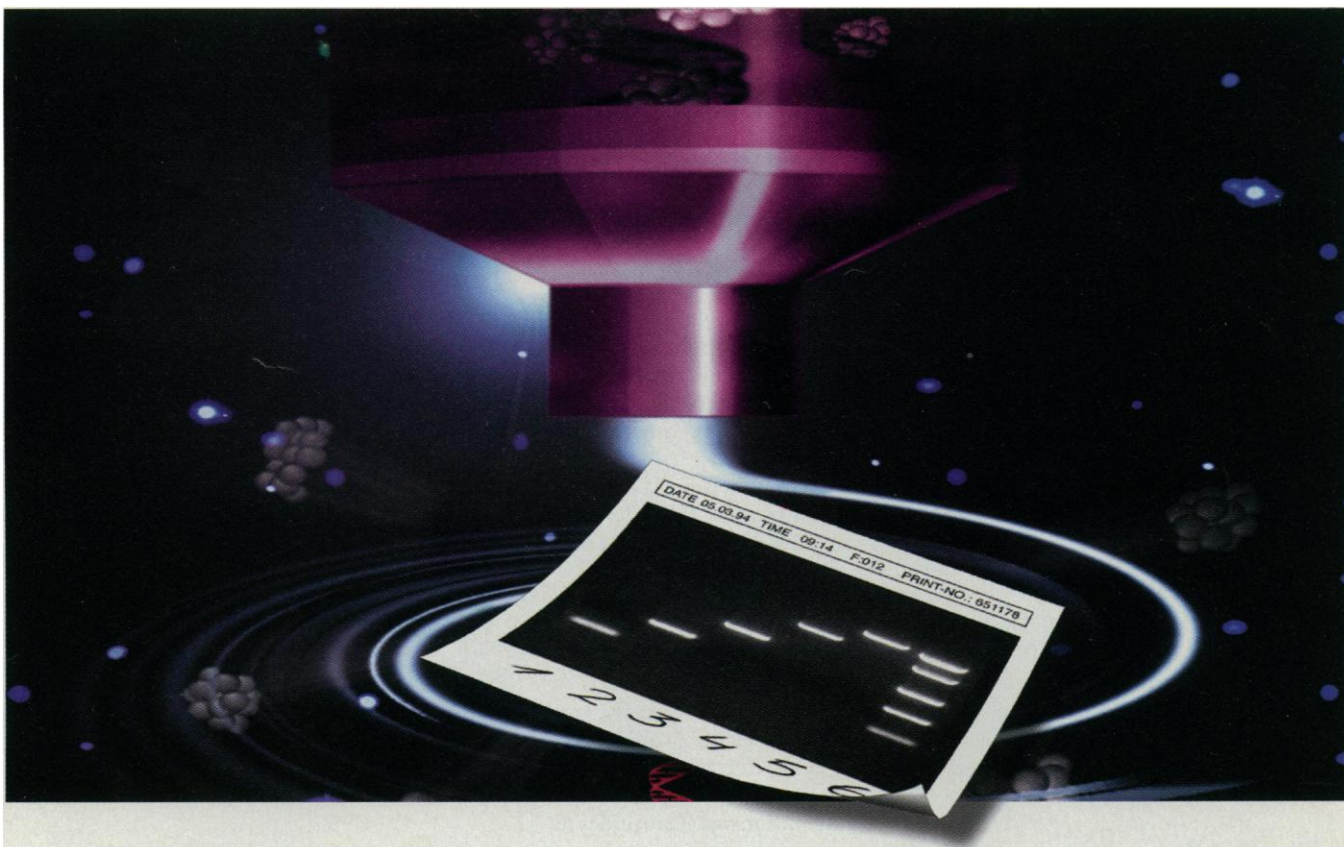
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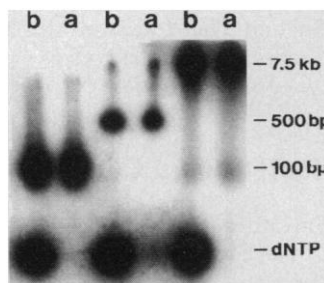
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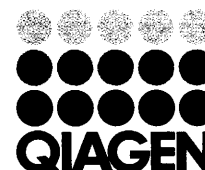
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## Subversive activity

Ten years typically elapse from initial HIV infection to the first appearance of AIDS-related symptoms, and although it was initially thought that the virus was dormant during this time, recent results have indicated it is a period of very active replication. Coffin (p. 483) reviews findings of rapid turnover of virions to build a model in which there is an equilibrium between T cell destruction by HIV and replenishment by the body's immune system, with the virus undergoing hundreds of replication cycles every year. This rapid turnover has the insidious consequence that genetic variation can build up populations of HIV strains resistant to various drug treatments before any such treatment is begun. On the other hand, the author notes, understanding the dynamics of the latent period may lead to ideas for new therapeutic strategies.

## Unseen influence

The faint, 2-kilometer wide  $\lambda$  ring around the planet Uranus was discovered in 1986 by Voyager 2. Re-analyzing the Voyager images, Showalter (p. 490) finds that the ring is better described as a set of five equispaced arcs, and that the ring's shape is slightly eccentric, with more-over a six-period sinusoidal deviation from a simple elliptical figure. The oddities can in principle be explained by the gravitational influence of a nearby moon, but no such moon was spotted by Voyager.

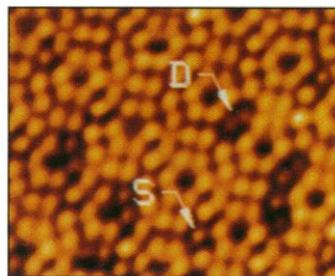
## Falling apart

Fabrication of devices on silicon is usually done by etching patterns in the substrate. When fluorine ( $F_2$ ) is used to dry-etch

## Rebuilding walls

Damage to arterial walls is normally repaired by local proliferation of vascular smooth muscle cells (SMCs), but this same process, carried to excess, is thought to be the cause of damage in atherosclerosis and in restenosis following balloon angioplasty. The retinoblastoma gene product (Rb) can inhibit SMC proliferation, but is rendered inactive upon phosphorylation by growth factor. Chang *et al.* (p. 518) introduced into an adenovirus a genetically altered form of Rb that cannot be phosphorylated; rats and pigs locally infected with the altered virus suffered significantly less restenosis after balloon angioplasty.

silicon, two different modes of chemisorption are observed—the common dissociative mechanism, forming two



adsorbed F atoms, and an unusual abstractive mechanism, which ejects one of the F atoms back into the gas phase. Molecular beam and scanning tunneling microscopy studies by Jensen *et al.* (p. 493) show that  $F_2$  molecules with low incident energies undergo abstractive adsorption, whereas  $F_2$  molecules with high incident energies chemisorb.

## Clouded predictions

A major uncertainty in understanding global climate dynamics and predicting past and future climates through modeling is the role that clouds play in the radiation balance. Cess *et al.* (p. 496) and Ramanathan *et al.* (p. 499) provide independent evidence that clouds absorb more solar radiation than has been parameterized in climate models. Thus clouds, in

addition to reflecting some incoming solar radiation, also trap a significant amount, further reducing radiation fluxes at the surface. Some of the larger implications for climate modeling are discussed by Kerr (p. 454) in a news story.

## More MORB melting

Recent isotopic studies of mid-ocean ridge basalts (MORBs) have implied that much magma is derived from great depths in the mantle where garnet is stable, but that very small (much less than 1%) amounts of melting are required—a result that is difficult to square with other evidence. Sims *et al.* (p. 508) now show, however, that the U/Th and Sm/Nd systematics of Hawaiian basalts and MORBs are consistent with larger amounts of melting, up to 6.5% or so for Hawaiian basalts.

## Switching functions

T cell receptors are switched on by specific peptide-major histocompatibility (MHC) molecule ligands, but small changes in those ligands can turn a full agonist into a partial agonist, or an antagonist that inhibits T cell functions. Madrenas *et al.* (p. 515; see also news by Marx, p. 459) used slightly altered pep-

tide-MHC ligands to show that for agonist, partial agonists, and an antagonist, ZAP-70 kinase is recruited to the T cell  $\zeta$  chain, but that only in the first case is ZAP-70 correctly activated by phosphorylation.

## Channel structure

Porins are outer membrane proteins of bacteria and serve as nonspecific permeability channels for small molecules. Because their structures have been determined to high resolution, they have offered revealing insights into structure-function relationships for membrane proteins of all organisms. The high resolution snapshot of maltoporin obtained by Schirmer *et al.* (p. 512) shows how maltose, the specific substrate of this protein, moves through the channel. Because maltoporin is used as a receptor by the bacteriophage  $\lambda$ , the structure also provides a scaffold for interpreting the large body of mutational data, as discussed by Hofnung in a Perspective (p. 473).

## Think we're the same?

Men and women perform differently on certain mental tests, such as verbal and motor tasks, and some sex-related differences in brain morphology have been noted. Gur *et al.* (p. 528) used positron emission tomography to measure cerebral metabolism in 61 male and female adults while they were awake but resting. The overall rate and pattern of brain metabolism were similar in all subjects, but men and women showed distinctly different metabolic rates in some specific brain regions, perhaps indicating a biological basis for sex differences in cognitive and emotional processing.



## NEW ENGLAND BIOLABS

# Molecular Biology

## Summer Workshops

### WHEN:

Session I: June 4-June 17, 1995  
Session II: July 2-July 15, 1995  
Session III: July 23-August 5, 1995

### WHERE:

Clark Science Center  
Smith College  
Northampton, MA

### FACULTY:

**Dr. Steven A. Williams**  
Dept. of Biological Sciences, Smith College,  
and Molecular and Cellular Biology,  
University of Massachusetts

**Dr. John R. McCarrey**  
Dept. of Genetics, Southwest  
Foundation for Biomedical Research

**Dr. Barton Slatko**  
New England Biolabs, Inc.  
DNA Sequencing Group

**Dr. Janet B. Williams**  
New England Biolabs, Inc.

### TO APPLY:

For this workshop, please submit a recent C.V.  
and a one page statement of motivation to:

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Clark Science Center  
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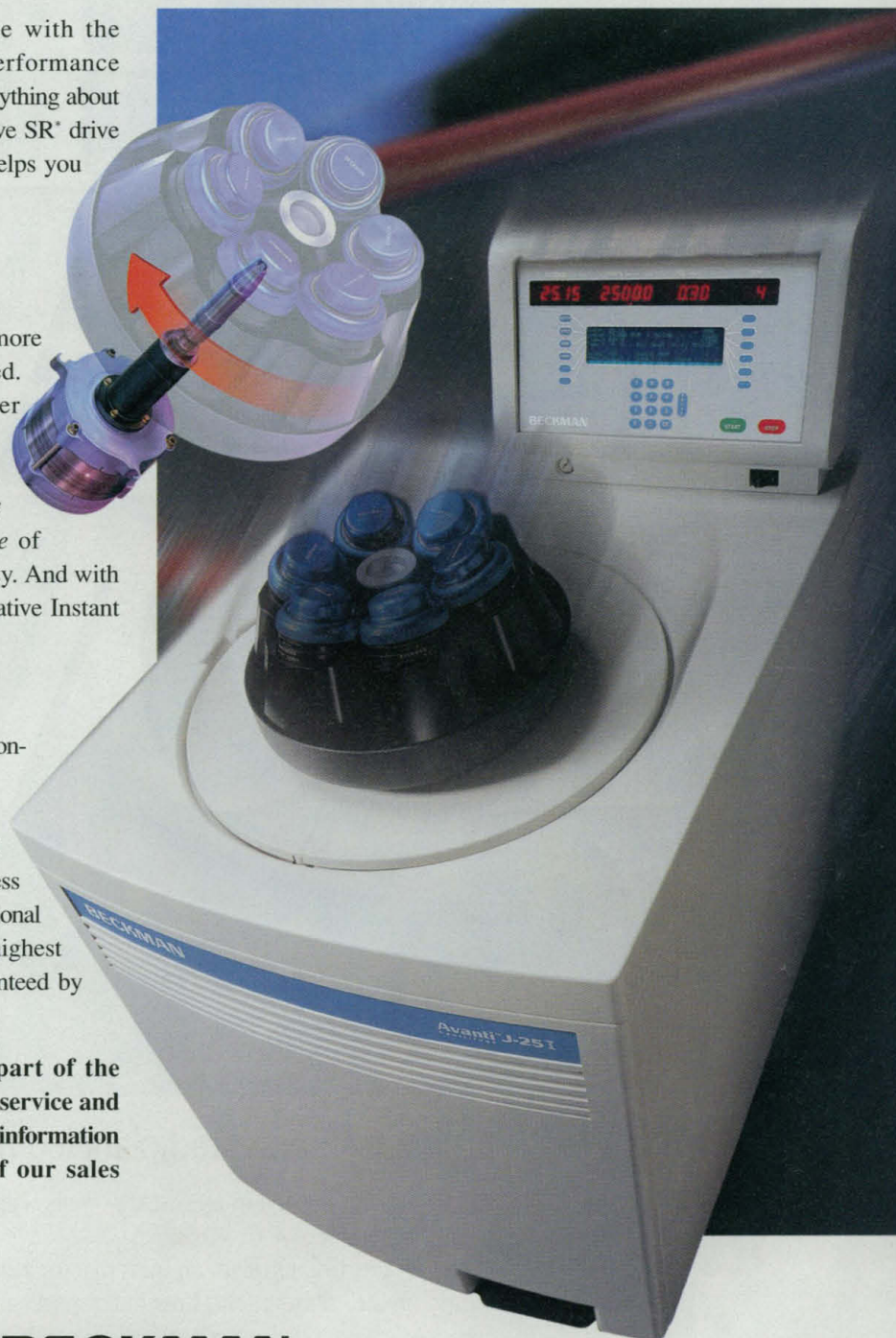
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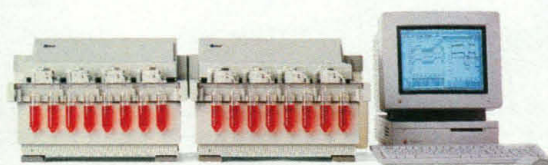


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1. Science 257, 1906-1912, (1992) 2. J. NIH Research 5, 69, (1993)

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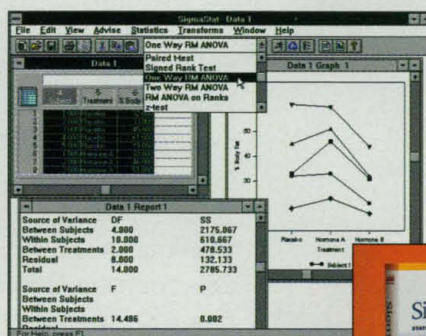
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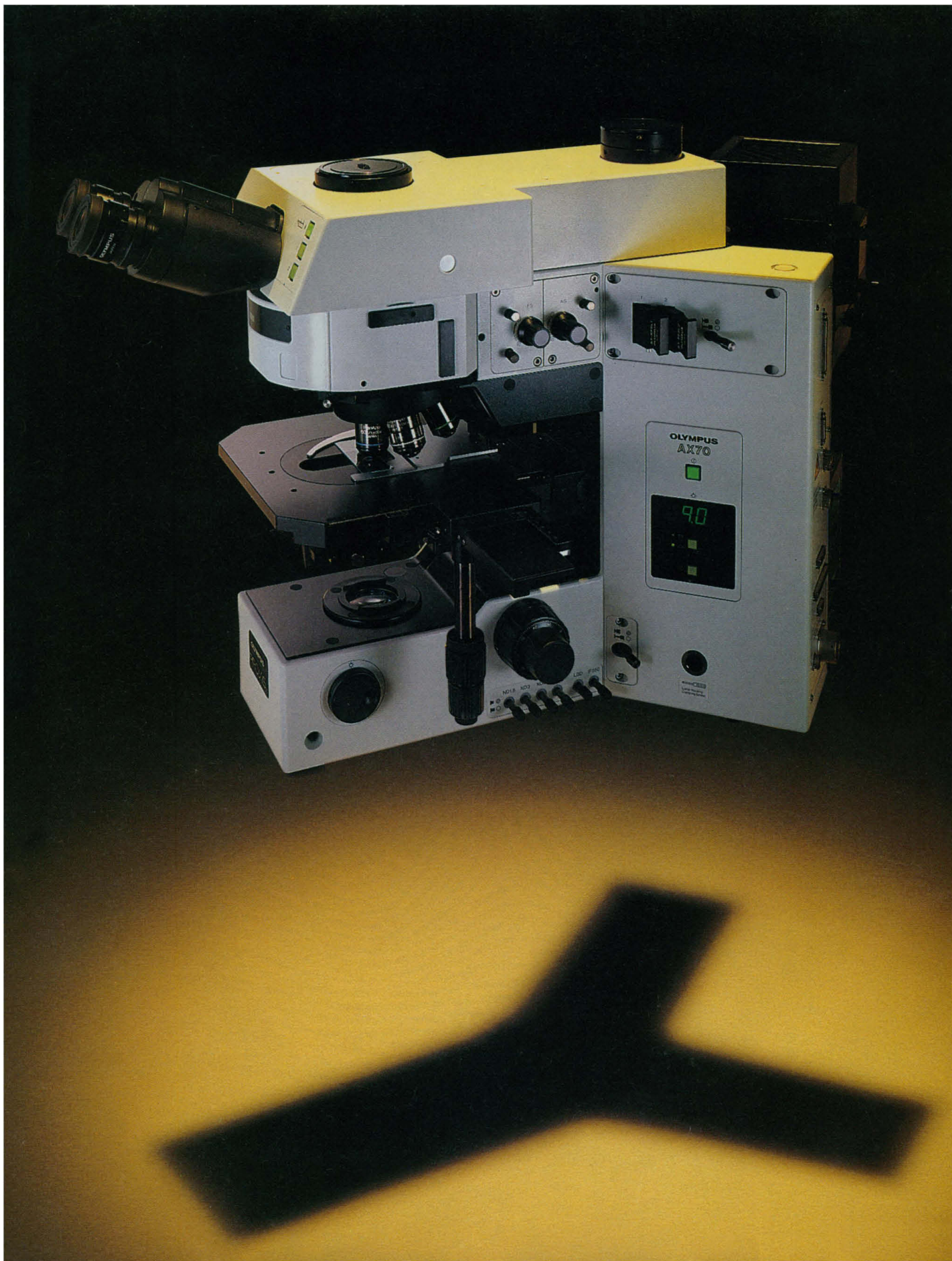
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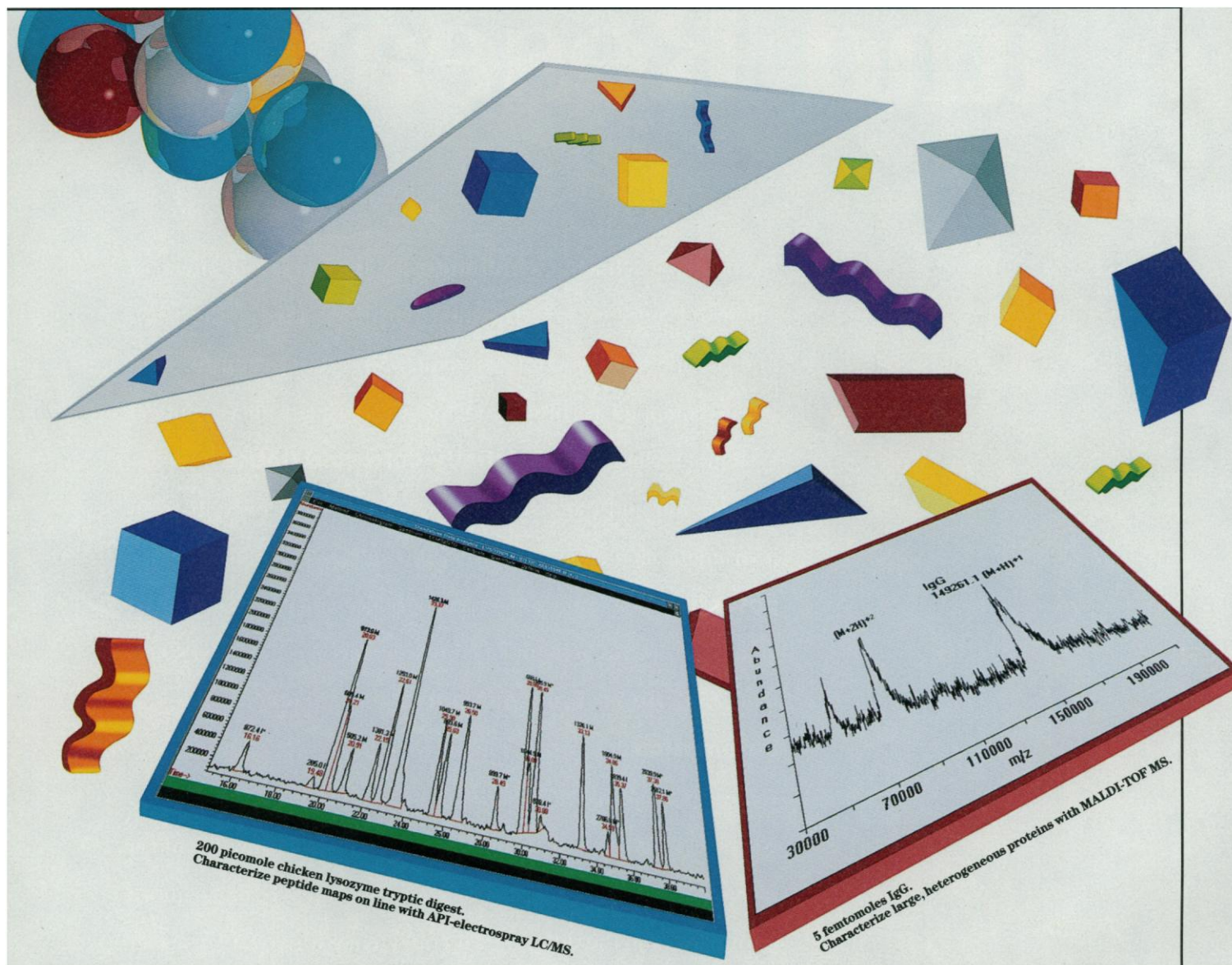
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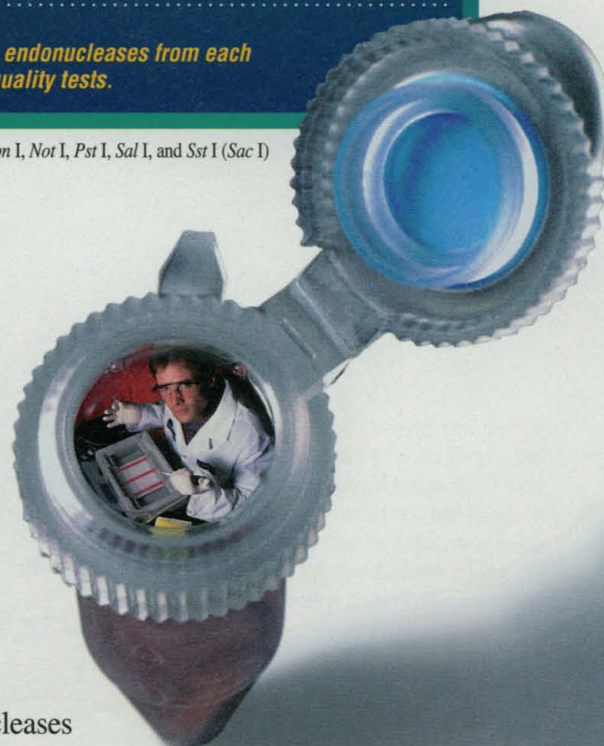
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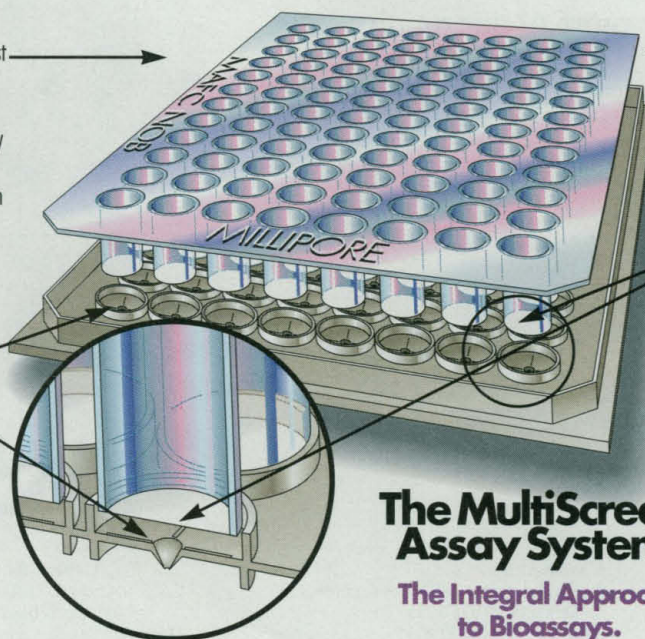




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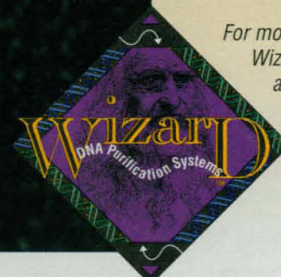
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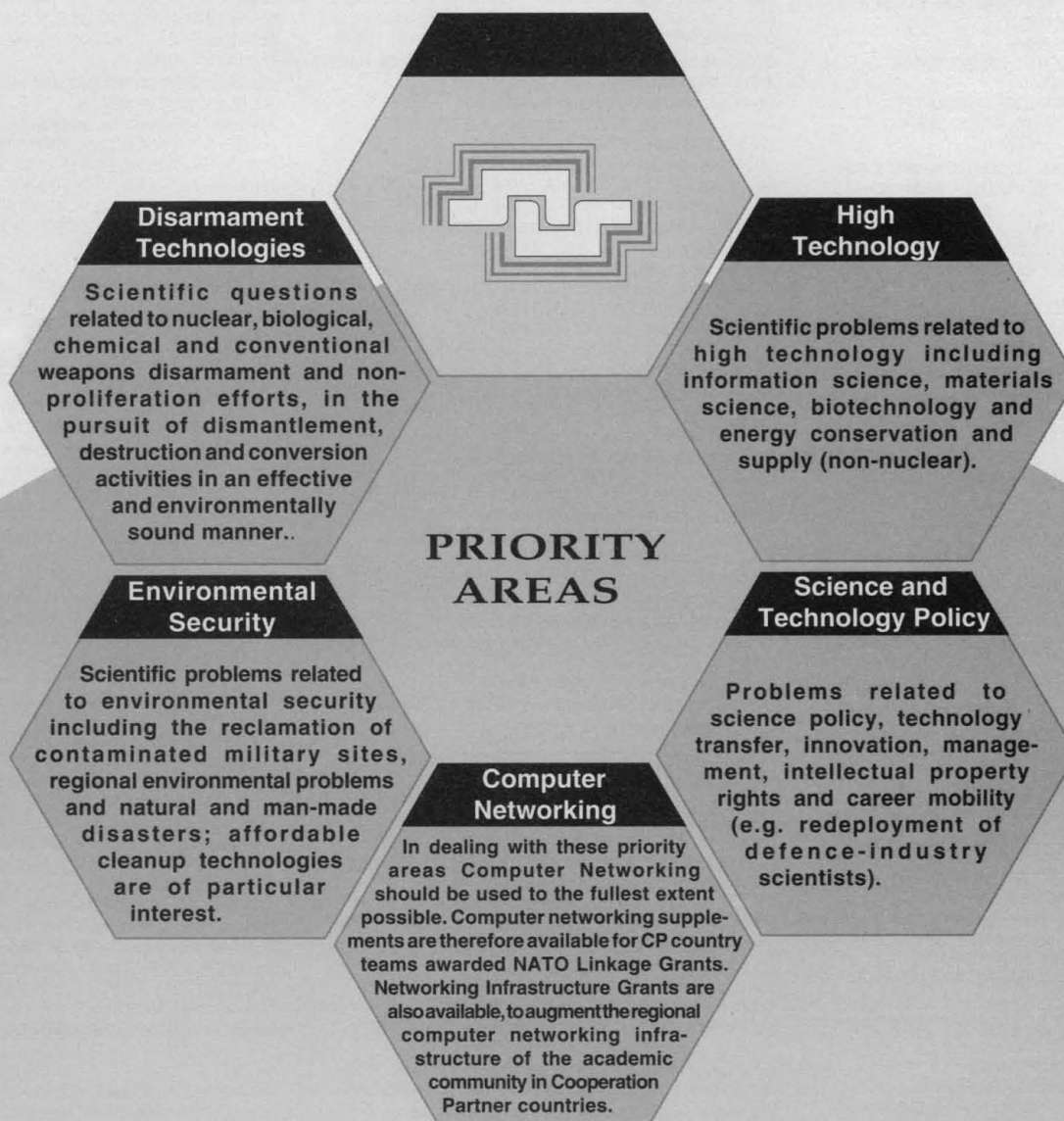


# NATO SCIENCE PROGRAMME

## 1995 CALENDAR OF MEETINGS

The NATO Science Programme provides assistance for scientific collaboration between NATO-country scientists and between NATO-country scientists and scientists in Cooperation Partner (CP) countries (the Commonwealth of Independent States and countries of Central and Eastern Europe).

Support is available for collaboration between NATO-country scientists in any scientific area for Collaborative Research Grants, or to organize Advanced Study Institutes. Support for collaboration between NATO-country and CP-country scientists is primarily but not exclusively in the Priority Areas outlined below. The possibilities of support for collaboration between NATO and CP-country scientists are for Collaborative Research Grants, Linkage Grants, Expert Visit Grants, and grants to organize Advanced Research Workshops and Advanced Study Institutes. Further information and application forms for these activities are available from the NATO Scientific Affairs Division at the address below.



Advanced Study Institutes (ASIs) and Advanced Research Workshops (ARWs) to be held in 1995 are given in the following pages. **Each meeting is held under the responsibility of its director(s): all requests for information, attendance or support should be addressed to the contact person listed.** Participation or tuition fees are not required from participants; some participants from NATO countries or Cooperation Partner countries may obtain grants from the meeting director to assist with travel and living expenses. Those wishing to organize ASIs or ARWs should write to the address below for application forms and further information.



Scientific Affairs Division (Ref. 95/1)  
NATO  
1110 Brussels, Belgium



## ADVANCED RESEARCH WORKSHOPS

Advanced Research Workshops (ARWs) are working meetings of about four days' duration, where scientists and engineers researching at the frontiers of a subject are able to engage in an intense but informal exchange of views, aiming at a critical assessment of existing knowledge and identification of directions for future action. Attendance at ARWs is mainly by invitation, but a few places are available for particularly well-qualified scientists of all nationalities upon application to the contact person listed below.

### PRIORITY AREAS

#### DISARMAMENT TECHNOLOGIES

##### SEA-DUMPED CHEMICAL MUNITIONS

12-14 Jan 1995 : KALININGRAD, RUSSIA

Contact: Dr. K. OLSON, CHEMICAL & BIOLOGICAL ARMS CONTROL INST., 2111 EISENHOWER AVE, SUITE 302, ALEXANDRIA, VA 22314, USA (fax: 703 739 1525)

Co-Director: Dr. A. KAFFKA, ACADEMY OF SCIENCES CENTRE FOR MILITARY POLICY, MOSCOW, RUSSIA 940445

##### STRATEGIC STABILITY IN THE POST-COLD WAR WORLD AND FUTURE OF NUCLEAR DISARMAMENT

1-3 Apr 1995 : AIRLIE, VIRGINIA, USA

Contact: Dr. M.L. BEST, LOGICON RDA, 2100 WASHINGTON BLVD, ARLINGTON, VA 22204-5706, USA

(fax: 703 920 4710/e-mail: MBEST@LOGICON.COM)

Co-Director: Prof. A.A. PIONTKOWSKY, WORLD LABORATORY MOSCOW BRANCH, RUSSIA 931617

##### DEVELOPMENT OF ON-SITE ANALYTICAL INSTRUMENTS FOR USE IN THE VERIFICATION OF THE CHEMICAL WEAPONS CONVENTION

1-3 Apr 1995 : WARSAW, POLAND

Contact: Ms. M.H. HEYL, AMC TREATY LABORATORY, US ARMY, DEPARTMENT OF DEFENSE, SCBRD-RT, APG, MD 21010, USA (fax: 410 671 3384)

Co-Director: Dr. M. SOKOLOWSKI, MILITARY INST. OF CHEMISTRY & RADIOMETRY, WARSAW, POLAND 941462

##### SCIENTIFIC ADVANCES IN ALTERNATIVE DEMILITARIZATION TECHNOLOGIES

24-28 Apr 1995 : WARSAW, POLAND

Contact: Dr. F.W. HOLM, SCIENCE APPLICATIONS INTERNATIONAL CORPORATION, 7102 MEADOW LANE, CHEVY CHASE, MD 20815, USA (fax: 410 671 6720/e-mail: BILL.HOLM@NETEAST.COM)

Co-Director: Dr. M. KOCH, MILITARY INST. OF CHEMISTRY & RADIOMETRY, WARSAW, POLAND 941368

##### DEMILITARIZATION OF CONVENTIONAL MUNITIONS & ROCKET PROPELLANTS AND REUSE AND RECYCLING CONCEPTS

9-11 May 1995 : KIEV, UKRAINE

Contact: Dr. T. ROSENDORFER, E.S.T., POSTFACH 1340, 86523 SCHROBENHAUSEN, GERMANY (fax: 49 8252 996788)

Co-Director: Dr. V.G. BARYAKHTAR, UKRAINIAN ACADEMY OF SCIENCES, KIEV, UKRAINE 941433

##### A RISK-BASED APPROACH TO THE EVALUATION & APPLICATION OF DISARMAMENT STRATEGIES AND TECHNOLOGIES

19-23 May 1995 : VISEGRAD, HUNGARY

Contact: Dr. B.J. GARRICK, PLG, 4590 MACARTHUR BLVD., SUITE 400, NEWPORT BEACH, CALIFORNIA 92660-2027, USA (fax: 714 833 2085/e-mail: BGARRICK@NAS.EDU)

Co-Director: Dr. E.N. AVROBIN, RUSSIAN FEDERAL NUCLEAR CENTER, SNEZHINSK, RUSSIA 941464

##### PULSED METAL VAPOUR LASERS - PHYSICS AND EMERGING APPLICATIONS IN INDUSTRY, MEDICINE AND SCIENCE

7-10 Aug 1995 : ST ANDREWS, UK

Contact: Dr. C.E. LITTLE, UNIV. OF ST ANDREWS, DEPT OF PHYSICS & ASTRONOMY, NORTH HAUGH, ST ANDREWS, FIFE KY16 9SS, UK (fax: 334 63104/e-mail: c.e.little@uk.ac.st-andrews)

Co-Director: Prof. N.V. SABOTINOV, INST. OF SOLID STATE PHYSICS, SOFIA, BULGARIA 931628

#### ENVIRONMENTAL SECURITY

##### DRAINAGE DEVELOPMENT IN ARID ZONES

9-12 Jan 1995 : WAGENINGEN, THE NETHERLANDS

Contact: Dr. M.G. BOS, ILRI, P.O. BOX 45, 6700 AA WAGENINGEN, THE NETHERLANDS (fax: (31) 8370 17187/e-mail: bos@iag.agro.nl)

Co-Director: Prof. V.A. DUKHOVNY, SANIIRI, UZBEKISTAN 940395

##### NUCLEAR & CHEMICAL CONTAMINATION IN COUNTRIES OF THE FORMER SOVIET UNION : CLEANUP, MANAGEMENT AND PREVENTION

16-22 Feb 1995 : ATLANTA, GEORGIA, USA

Contact: Dr. E.J. KIRK, AAAS, PROJECT ON EUROPE AND THE COUNTRIES OF THE FSU, 1333 H STREET NW, WASHINGTON, DC 20005, USA (fax: 202 289 4958/e-mail: EKIRK@AAAS.ORG)

Co-Director: Dr. L.V. POPOVA, CENTER FOR NUCL. ECOLOGY & ENERGY POLICY, MOSCOW, RUSSIA 941347

##### ENVIRONMENTAL AND NON-ENVIRONMENTAL DETERMINANTS OF THE EAST-WEST LIFE EXPECTANCY GAP

20-22 Mar 1995 : EGHAM, UK

Contact: Prof. C. HERTZMAN, DEPT. OF HEALTH CARE & EPIDEMIOLOGY JAMES MATHER BUILDING, 5804 FAIRVIEW AVE, VANCOUVER, B.C. V6T 1Z3, CANADA (fax: 604 822 4994/e-mail: skelly@unixg.ubc.ca)

Co-Director: Dr. M. BOBAK, CHARLES UNIV., CZECH REPUBLIC 940926

##### ENVIRONMENTAL INFRASTRUCTURE MANAGEMENT

30-5 May 1995 : KIEV, UKRAINE

Contact: Dr. J.J. BOLAND, JOHNS HOPKINS UNIV., INST. FOR POLICY STUDIES, SHRIVER HALL, BALTIMORE, MD 21218 USA (fax: 410 516 8996/e-mail: jboland@jhvm.hcf.jhu.edu)

Co-Director: Dr. A. DEMYDENKO, UNIV. OF KIEV-MOHYLA, UKRAINE 931656

##### NEW APPROACHES TO THE DEVELOPMENT OF BIOINDICATOR SYSTEMS FOR SOIL POLLUTION

May 1995 : SERGIEV POSAD, RUSSIA

Contact: Prof. NM VAN STRAALLEN, VRIJE UNIVERSITEIT, DEPT. OF ECOLOGY AND ECOTOXICOLOGY, DE BOELELAAN 1087, 1081 HV AMSTERDAM THE NETHERLANDS (fax: (31) 20 6429202)

Co-Director: Prof. DA KRIVOLUTSKI, ACADEMY OF SCIENCES LAB. OF BIOINDICATION, MOSCOW, RUSSIA 940661

##### REGIONAL AND GLOBAL MERCURY CYCLES : SOURCES, FLUXES AND MASS BALANCES

10 -14 Jul 1995 : NOVOSIBIRSK, RUSSIA

Contact: Prof. W. BAUYENS, FREE UNIV. OF BRUSSELS, PLEINLAAN 2, 1050 BRUSSELS, BELGIUM (fax: 629 34 03/e-mail: LGOEYENS@VNET3.VUB.AC.BE)

Co-Director: Prof. O VASILIEV, ACADEMY OF SCIENCES INST. FOR WATER & ENVIRONMENT PROBLEMS, BARNAUL, RUSSIA 941402

##### REGIONAL APPROACHES TO WATER POLLUTION IN THE ENVIRONMENT

5-10 Sep 1995 : LIBLICE, CZECH REPUBLIC

Contact: Dr. P.E. RIJTEMA, WINAND STARING CENTRE, INTEGRATED LAND, SOIL & WATER RESEARCH, P.O. BOX 125, 6700 WAGENINGEN, THE NETHERLANDS

(fax: (31) 8370 24812/e-mail: p.groenendijk@sc.agro.nl)

Co-Director: Dr. V. ELIAS, ACADEMY OF SCIENCES INST. OF HYDRODYNAMICS, PRAGUE, CZECH REPUBLIC 941370

##### DISTURBANCE AND RECOVERY OF ARCTIC TERRESTRIAL ECOSYSTEMS

26-30 Sep 1995 : ROVANIEMI, FINLAND

Contact: Prof. R.M.M. CRAWFORD, UNIV. OF ST ANDREWS, PLANT SCIENCES LABORATORY, ST ANDREWS FIFE KY16 9TH, UK (fax: 034463366/e-mail: rmmc@st-and.ac.uk)

Co-Director: Dr. GV KALABIN, INST FOR NORTH ECOLOGICAL PROBLEMS, MURMANSK REGION, RUSSIA 931573

##### ENVIRONMENTAL REHABILITATION OF LARGE-SCALE WATER RESOURCE SYSTEMS

1-7 Oct 1995 : MOSCOW, RUSSIA

Contact: Prof. D.P. LOUCKS, CORNELL UNIV., CIVIL & ENVIRONMENTAL ENG., HOLLISTER HALL, ITHACA, NY 14853-3501 USA (fax: 1-607-255-9004/e-mail: DPL3@CORNELL.EDU)

Co-Director: Prof. N.F. GLAZOVSKY, ACADEMY OF SCIENCES INST. OF GEOGRAPHY, MOSCOW, RUSSIA 941479

#### HIGH TECHNOLOGY

##### BIOTECHNOLOGICAL REMEDIATION OF CONTAMINATED SITES

6-10 May 1995 : LIVI, UKRAINE

Contact: Prof. A. SCOZZAFAVA, UNIV. OF FLORENCE, DEPT. OF CHEMISTRY, VIA G. CAPPONI 7, 50121 FLORENCE ITALY (fax: 39 55 275 75 55)

Co-Director: Prof. S. VARFOLOMEEV, LOMONOSOV MOSCOW STATE UNIV., RUSSIA 941429

##### NEW PROMISING ELECTROCHEMICAL SYSTEMS FOR RECHARGEABLE BATTERIES

15-18 May 1995 : KIEV, UKRAINE

Contact: Prof. F. BECK, DUISBURG UNIVERSITAT, FB 6-ELEKTROCHEMIE, LOTHARSTRASSE 1, D 47057 DUISBURG GERMANY (fax: 49 203 3792540)

Co-Director: Prof. V.Z. BARSUKOV, ACADEMY OF SCIENCES INST. OF GENERAL & INORGANIC CHEMISTRY, KIEV, UKRAINE 941437

##### MULTI-CHIP MODULES WITH INTEGRATED SENSORS

18-20 May 1995 : BUDAPEST, HUNGARY

Contact: Dr. K. JONES, FLORIDA INTERNATIONAL UNIVERSITY, MECHANICAL ENG. DEPT, UNIV. PARK CAMPUS, MIAMI, FL 33199, USA (fax: 305 348 2649/e-mail: JONESWK@SERVAXFIEDU)

Co-Director: Prof. G. HARSANYI, TECHNICAL UNIV. OF BUDAPEST, HUNGARY 941320

##### PHOTOACTIVE ORGANIC MATERIALS: SCIENCE & APPLICATIONS

25-30 Jun 1995 : AVIGNON, FRANCE

Contact: Dr. F. KAJZAR, CEN SACLAY, CEA/DTA/LETI, DEIN/SPE, 91191 GIF-SUR-YVETTE CEDEX, FRANCE (fax: 33 1 6908 7679)

Co-Director: Prof. V.M. AGRANOVICH, ACADEMY OF SCIENCES INST. OF SPECTROSCOPY, TROITSK, RUSSIA 941055

##### FINE PARTICLES SCIENCE AND TECHNOLOGY FROM MICRO TO NANOPARTICLES

15-21 July 1995 : MARATEA, ITALY

Contact: Prof. E. PELIZZETTI, UNIV. DI TORINO, DIPTO CHIMICA ANALITICA, VIA GIURIA 5, 10125 TORINO ITALY (fax: 39 11 6707615/e-mail: pelizzetti@silver.ch.unito.it)

Co-Director: Prof. J. SZCZYPA, UNIV. M. CURIE SKLODOWSKA, LUBLIN, POLAND 940759

#### SCIENCE AND TECHNOLOGY POLICY

##### SCIENCE CITIES: A COMPARATIVE EXPLORATION OF THE STRUCTURE AND FUNCTION OF SCIENTIFIC TECHNICAL GROWTH CENTERS

23-25 Mar 1995 : SOPHIA-ANTIPOLIS, FRANCE

Contact: Prof. R. KARGON, JOHNS HOPKINS UNIV., BALTIMORE, MD 21218, USA (fax: 410-516-7502/e-mail: robert@crow.hs.jhu.edu)

Co-Director: Prof. N. NIKITINA, MOSCOW STATE UNIV., RUSSIA 940578

##### SCIENTIFIC AND TECHNICAL COOPERATION OF BALTIC STATES IN THE NEW EUROPE AND CONVERSION OF THEIR INDUSTRY

5-8 Jun 1995 : VILNIUS, LITHUANIA

Contact: Prof. E. ALTVAIER, FREIE UNIVERSITAT BERLIN, OTTO-SUHR INSTITUT, IHNE STR. 22, 14195 BERLIN, GERMANY (fax: 49 30 335 9181)

Co-Director: Prof. K. PRUNSKIENE, LITHUANIAN-EUROPEAN INST., VILNIUS, LITHUANIA 941474

##### MANAGEMENT, TECHNOLOGY AND HUMAN RESOURCES POLICY IN THE ARCTIC (THE NORTH)

July 1995 : NOVOSIBIRSK, RUSSIA

Contact: Dr. L. LYCK, COPENHAGEN BUSINESS SCHOOL, INST. OF ECONOMICS, NANSSENSGADE 19.5, 1366 COPENHAGEN K DENMARK (fax: 45 38152576/e-mail: LYCK/ECO@CBS.DK)

Co-Director: Dr. V.I. BOYKO, ACADEMY OF SCIENCES INST. OF PHILOSOPHY & LAW, NOVOSIBIRSK, RUSSIA 941363

### GENERAL

#### LIFE SCIENCES

##### ANALYTICAL USE OF FLUORESCENT PROBES IN ONCOLOGY

14-18 Oct 1995 : MIAMI, USA

Contact: Prof. E KOHEN, UNIV. OF MIAMI AT CORAL GABLES, COX SCIENCE BLDG, POB 249118, CORAL GABLES, FL 33124 USA (fax: 1 305 284 3039/e-mail: ekohen@umiami.ir.miami.edu) 931104

#### PHYSICS AND CHEMISTRY

##### LOW DIMENSIONAL STRUCTURES PREPARED BY EPITAXIAL REGROWTH ON PATTERNED SUBSTRATES

20-24 Feb 1995 : RINGBERG CASTEL, GERMANY

Contact: Dr. K. EBERL, MPI FUER FESTKORPERFORSCHUNG, P.O. BOX 80 06 65, 70506 STUTTGART, GERMANY (fax: 49 0711 689 1010

e-mail: eberl@servox.mpi-stuttgart.mpg.de) (NANO) 940567

##### CHEMICAL, STRUCTURAL AND ELECTRONIC ANALYSIS OF HETEROGENEOUS SURFACES ON NANOMETER SCALE

3-5 May 1995 : TRIESTE, ITALY

Contact: Prof. R ROSEI, SINCROTRONE, 34012 TRIESTE, ITALY, (fax: 00 39 40 226338) (NANO) 940573

##### NEW METHODS IN QUANTUM THEORY

14-19 May 1995 : HALKIDIKI, GREECE

Contact: Prof. C.A. TSIPIS, ARISTOTLE UNIV. OF THESSALONIKI, LAB OF APPLIED QUANTUM CHEMISTRY, POB 135, 540 06 THESSALONIKI GREECE (fax: 30 31 997851/e-mail: tsipis@olymp.ccf.auth.gr)

Co-Director: Prof. V.S. POPOV, INST OF THEORETICAL & EXPER. PHYSICS, RUSSIA 941066

##### BIOORGANIC CATALYSIS

17-21 May 1995 : PITTSBURGH, USA

Contact: Prof. C.S. WILCOX, UNIV. OF PITTSBURGH, DEPARTMENT OF CHEMISTRY, PITTSBURGH, PA 15260, USA (fax: 1 412 624 8552/e-mail: daylite@vms.cis.pitt.edu) (CHEM) 931600

##### THE CHEMICAL PHYSICS OF FULLERENES 10 (AND 5) YEARS LATER

12-16 Jun 1995 : VARENNNA, ITALY

Contact: Dr. W ANDREONI, ZURICH RESEARCH LAB., IBM RESEARCH DIVISION, SAUMERSTRASSE 4, 8803 RUSCHLIKON SWITZERLAND (fax: 41 1 724 08 09) (NANO) 941328

##### THE PHYSICS OF SLIDING FRICTION

20-23 Jun 1995 : MIRAMARE, TRIESTE, ITALY

Contact: Dr B.N.J. PERSSON, INSTITUT FUER FESTKORPERFORSCHUNG, FORSCHUNGSZENTRUM JULICH, D-52425 JULICH, GERMANY (fax: 49 2461 61 28 50) (NANO) 941005

##### SUPER INTENSE LASER ATOM PHYSICS (IVTH)

15-19 Jul 1995 : MOSCOW, RUSSIA

Contact: Dr. H.G. MULLER, FOM INST. FOR ATOMIC & MOLECULAR PHYSICS, KRUISLAAN 407, 1098 SJ AMSTERDAM, THE NETHERLANDS (fax: 31 20 668 41 06/e-mail: muller@amolf.amolf.nl)

Co-Director: Dr. M. FEDOROV, RUSSIAN ACADEMY OF SCIENCES, MOSCOW, RUSSIA 940914

##### QUANTUM OPTICS IN WAVELENGTH SCALE STRUCTURES

27 Aug-1 Sep 1995 : CARGESE, CORSICA, FRANCE

Contact: Dr. J.G. RARITY, DRA MALVERN, ST ANDREWS ROAD, MALVERN, WORCS WR14 3PS, UK (fax: 44 684 896270/e-mail: rarity@dra.hmg.gb) (NANO) 940588

##### CRYSTALS: SUPRAMOLECULAR MATERIALS

27 Aug-1 Sep 1995 : ITALY

Contact: Prof. A GAVEZZOTTI, UNIV. DI MILANO, DIPTO DI CHIMICA FISICA & ELETTROCHIMICA, VIA GOLGI 19, 20133 MILANO ITALY (fax: 39 2 70638129/e-mail: gave@rs6.csrsc.mi.cnr.it) (CHEM) 940807



## ADVANCED RESEARCH WORKSHOPS (continued)

### MODULAR CHEMISTRY

**8-13 Sep 1995 : ESTES PARK, COLORADO, USA**

**Contact:** Prof. J. MICHL, UNIV. OF COLORADO, DEPT OF CHEMISTRY & BIOCHEMISTRY, BOULDER, CO 80309-0215, USA (fax: 1 303 492 0799/e-mail: michl@eefus.colorado.edu) (CHEM) 940590

**DNA CLEAVERS AND CHEMOTHERAPY OF CANCER & VIRAL DISEASES**

**11-14 Sep 1995 : TOULOUSE, FRANCE**  
**Contact:** Dr. B. MEUNIER, CNRS, LAB. DE CHIMIE DE COORDINATION, 205 ROUTE DE NARBONNE, F-31077 TOULOUSE CEDEX FRANCE (fax: 33-61553003) (CHEM) 941304

**MAGNETISM: A SUPRAMOLECULAR FUNCTION**

**16-20 Sep 1995 : MAUBUISSON, FRANCE**  
**Contact:** Prof. O. KAHN, UNIVERSITE PARIS-SUD, LAB DE CHIMIE INORGANIQUE, 91405 ORSAY, FRANCE (fax: 1 6985 5536/e-mail: msf95@cth.u-psud.fr) (CHEM) 940834

### ENVIRONMENTAL SCIENCES

**PROCESSES OF CHEMICAL EXCHANGE BETWEEN THE ATMOSPHERE AND POLAR SNOW**

**18-24 Mar 1995 : IL CIOCCO, ITALY**

**Contact:** Dr. E.W. WOLFF, BRITISH ANTARCTIC SURVEY, HIGH CROSS, MADINGLEY RD., CAMBRIDGE CB3 0ET, UK (fax: 44 223 62616/e-mail: e.wolff@bas.ac.uk) (SGEC) 940453

**EVALUATION OF SOIL ORGANIC MATTER MODELS USING EXISTING, LONG-TERM DATASETS**

**8-12 May 1995 : HARPENDEN, HERTS, UK**  
**Contact:** Dr. D.S. POWLSON, IACR ROTHAMSTED EXPERIMENTAL STATION, SOIL SCIENCE DEPT., HARPENDEN, HERTS. AL5 2JQ, UK (fax: 44 582 760981) (SGEC) 940585

**MICROBIOLOGY OF ATMOSPHERIC TRACE GASES : SOURCES, SINKS AND GLOBAL CHANGE PROCESSES**

**13-18 May 1995 : IL CIOCCO, ITALY**  
**Contact:** Dr. C. MURRELL, UNIV. OF WARWICK, DEPT. OF BIOLOGICAL SCIENCES, COVENTRY CV4 7AL, UK (fax: 44 203 523568) (SGEC) 941311

**INTEGRATED ASSESSMENT OF GLOBAL ENVIRONMENTAL CHANGE: SCIENCE AND POLICY**

**4-8 Jun 1995 : DURHAM, NORTH CAROLINA, USA**  
**Contact:** Dr. R.S. CHEN, CONSORTIUM FOR INTERNATIONAL EARTH SCIENCE INFORMATION NETWORK (CIESIN), 2250 PIERCE ROAD, UNIVERSITY CENTER, MICHIGAN 48710, USA (fax: 1 517 797 2622/e-mail: BOB.CHEN@CIESIN.ORG) (SGEC) 941369

**PAST AND FUTURE RAPID ENVIRONMENTAL CHANGES : THE SPATIAL AND EVOLUTIONARY RESPONSES OF TERRESTRIAL BIOTA**

**26-30 Jun 1995 : CRIEFF, PERTHSHIRE, UK**  
**Contact:** Dr. B. HUNTLEY, DURHAM UNIVERSITY, ENVIRONMENTAL RES. CENTRE, DEPARTMENT OF BIOLOGICAL SCIENCES, SOUTH ROAD, DURHAM DH1 3LE, UK (fax: 44 91 374 2432/e-mail: BRIAN.HUNTLEY@DURHAM.AC.UK) (SGEC) 941329

**GLOBAL CHANGE: MODELLING SOIL EROSION BY WATER**

**11-14 Sep 1995 : OXFORD, UK**  
**Contact:** Dr. J. BOARDMAN, UNIVERSITY OF OXFORD, ENVIR. CHANGE UNIT, MANSFIELD ROAD., OXFORD OX1 3TB, UK (fax: 44 865 281181) (SGEC) 941354

**GROUND LEVEL AND SATELLITE OZONE OBSERVATIONS: OZONE CHANGES IN THE MEDITERRANEAN REGION**

**November 1995 : ATHENS, GREECE**  
**Contact:** Prof. C. VAROTSOS, ATHENS UNIVERSITY, APPLIED PHYSICS DEPARTMENT, 33 IPOKRATOUS STR., 106 80 ATHENS, GREECE (fax: 30 1 3605080) (SGEC) 940942

## ADVANCED STUDY INSTITUTES

Advanced Study Institutes (ASIs) are high-level tutorial courses of two weeks' duration where a subject is treated in depth by lecturers of international standing. Presentations are made to about 100 scientists or research students already specialised in the field, or who have an advanced general scientific background. Attendance at ASIs is open to all suitably-qualified applicants irrespective of nationality, upon application to the contact person listed below.

### PRIORITY AREAS

#### DISARMAMENT TECHNOLOGIES

**DEFENSE CONVERSION STRATEGIES**

**1-14 Jul 1995 : PITLOCHRY, UK**  
**Contact:** Dr. L.H. LUESSEN, NAVAL SURFACE WEAPONS CENTER., DAHLGREN DIVISION (CODE F21), 17320 DAHLGREN ROAD, DAHLGREN, VA 22448-5100 USA (fax: 1 703 663 1410/e-mail: lluesse@relay.nswc.navy.mil) **Co-Director:** Prof. V. BYSTRICKII, ACADEMY OF SCIENCES INST. OF HIGH CURRENT ELECTRONICS, TOMSK, RUSSIA 940797

#### ENVIRONMENTAL SECURITY

**RECENT ADVANCES IN GROUND-WATER POLLUTION CONTROL AND REMEDIATION**

**20 May-2 Jun 1995 : KEMER, ANTALYA, TURKEY**  
**Contact:** Prof. M.M. ARAL, GEORGIA INST OF TECHNOLOGY, SCHOOL OF CIVIL ENGINEERING, ATLANTA, GA 30332, USA (fax: 1 404 894 2278/e-mail: ma6@ce.gatech.edu) **Co-Director:** Prof. V.S. ALEXEEV, INST. VODGEO, MOSCOW, RUSSIA 940321

**RADIOACTIVE CONTAMINATED SITE RESTORATION**

**19-28 Jun 1995 : ZARECHNY, SVERDLOVSK REGION, RUSSIA**  
**Contact:** Prof. F.F. LUYKX, DEREYMAEKERLAAN 28, 3080 TERVUREN, BELGIUM (fax: 32 2 767 37 42/e-mail: VDCASTEL@BMLSK11.BITNET) **Co-Director:** Prof. G.G. POLIKARPOV, ACADEMY OF SCIENCES INST. OF BIOLOGY OF THE SOUTHERN SEAS, SEBASTOPOL, UKRAINE 941300

#### HIGH TECHNOLOGY

**STABILITY OF MATERIALS**

**25 Jun-7 Jul 1995 : CORFU, GREECE**  
**Contact:** Dr. A. GONIS, INSTITUTE OF MATERIALS SCIENCE, DEPT. OF CHEMISTRY, UNIVERSITY OF LIVERPOOL, L69 3GB, LIVERMORE, CA 94550 USA (fax: 1 510-422-7300) 931197

**HIGH POWER LASERS - SCIENCE AND ENGINEERING**

**16-29 Jul 1995 : KARLOVY VARY, CZECH REPUBLIC**  
**Contact:** Dr. R. KOSSOWSKY, EMERGING TECHNOLOGIES INC., MATERIALS ENGINEERING AND SYSTEMS DIV., 6327 BURCHFIELD AVE., PITTSBURGH, PA 15217, USA (fax: 1 412 421 4342/e-mail: wk02025@worldlink.com) **Co-Director:** Prof. M. JELINEK, ACADEMY OF SCIENCES INST. OF PHYSICS, PRAGUE, CZECH REPUBLIC 940456

**MECHANICAL BEHAVIOUR OF MATERIALS AT HIGH TEMPERATURE**

**12-22 Sep 1995 : SINTRA, PORTUGAL**  
**Contact:** Prof. C.A.G. MOURA BRANCO, LISBON UNIV. OF TECHNOLOGY, DEPT OF MECHANICAL ENG., AV ROVISCO PAIS, 1096 LISBON CODEX PORTUGAL (fax: 351 1 847 40 45) **Co-Director:** Dr. V. SKLENICKA, ACADEMY OF SCIENCES INST. OF PHYSICS OF MATERIALS, BRNO, CZECH REPUBLIC 941144

**DEVICES BASED ON LOW DIMENSIONAL SEMICONDUCTOR STRUCTURES**

**18-30 Sep 1995 : SOZOPOL, BULGARIA**  
**Contact:** Prof. M. BALKANSKI, UNIVERSITE P & M CURIE, LAB. DE PHYSIQUE DES SOLIDES, 4 PL. JUSSIEU, TOUR 13, 2 ETAGE, 75252 PARIS CEDEX 05, FRANCE (fax: 33 1 44275896) **Co-Director:** Dr. I. YANCHEV, UNIV. OF SOFIA, BULGARIA 941321

#### LIFE SCIENCES

**EICOSANOIDS : FROM BIOTECHNOLOGY TO THERAPEUTIC APPLICATIONS**

**27 Apr-7 May 1995 : ERICE, ITALY**  
**Contact:** Prof. G.C. FOLCO, UNIV. OF MILAN, INST. OF PHARMACOLOGICAL SCIENCES, VIA BALZARETTI 9, 20133 MILAN, ITALY (fax: 39 2 29 40 49 61/e-mail: asfar05@imisiem) 940472

**INTERNATIONAL SCHOOL OF BIOPHYSICS : NEUROBIOLOGY**

**2-12 May 1995 : ERICE, ITALY**  
**Contact:** Prof. V. TORRE, UNIVERSITA DI GENOVA, DIP. DI FISICA, VIA DODECANESO 33, 16146 GENOVA ITALY (fax: 39 10 31 42 18/e-mail: E-MAIL: TORRE@GENOVA.INFN.IT) 940507

**PROGRESS IN FLOW AND IMAGE CYTOMETRY**

**15-19 May 1995 : VILLEJUIF, FRANCE**  
**Contact:** Dr. A. JACQUEMIN-SABLON, LAB. DE CYTOMETRIE, CNRS - UPS 47, 7, RUE GUY MOQUET, 94800 VILLEJUIF FRANCE (fax: 33 1 46 77 39 61) 940495

**ENGINEERING OF/WITH LIPASES**

**22 May-2 Jun 1995 : OPORTO, PORTUGAL**  
**Contact:** Prof. F.X. MALCATA, ESCOLA SUPERIOR DE BIOTECNOLOGIA, RUA Dr. ANTONIO BERNARDINO DE ALMEIDA, 4200 PORTO, PORTUGAL (fax: 351 2 59 03 51/e-mail: xmalcata@esb.ucp.pt) 940513

**BIOLOGICAL MAGNETIC RESONANCE: DYNAMICS AND THE PROBLEM OF RECOGNITION IN BIOLOGICAL MACROMOLECULES**

**22-30 May 1995 : ERICE, ITALY**  
**Contact:** Prof. J.F. LEFEVRE, UNIVERSITE LOUIS PASTEUR, BLD. SEBASTIEN BRANT, 67400 STRASBOURG-ILLKIRCH, FRANCE (fax: 33 88 655343) 941106

**MOLECULAR, CELLULAR, AND CLINICAL ASPECTS OF ANGIOGENESIS**

**17-27 Jun 1995 : HALKIDIKI, GREECE**  
**Contact:** Prof. M.E. MARAGOUAKIS, UNIV. OF PATRAS, MEDICAL SCHOOL, DEPT. OF PHARMACOLOGY, RIO, PATRAS 26110, GREECE (fax: 061-997691) 940947

**MOLECULAR DYNAMICS OF BIOLOGICAL MEMBRANES**

**19 Jun-1 Jul 1995 : CARGESE, CORSICA, FRANCE**  
**Contact:** Dr. J.A.F. OP DEN KAMP, UNIV. OF UTRECHT, CTR FOR BIOMEMBRANES & LIPID ENZYMOLOGY, P.O. BOX 80.054, 3508 TB UTRECHT, THE NETHERLANDS (fax: 31 30 521478/e-mail: j.a.f.opdenkamp@chem.ruu.nl) 940492

**TARGETING OF DRUGS: STRATEGIES FOR OLIGONUCLEOTIDE AND GENE DELIVERY IN THERAPY**

**24 Jun-5 Jul 1995 : CAPE SOUNION BEACH, GREECE**  
**Contact:** Prof. G. GREGORIADIS, UNIV. OF LONDON, CENTRE FOR DRUG DELIVERY RESEARCH, 29-39 BRUNSWICK SQUARE, LONDON WC1N 1AX, UK (fax: 44 717535820) 941114

**POST-TRANSCRIPTIONAL CONTROL OF EUKARYOTIC GENE EXPRESSION**

**27 Aug-10 Sep 1995 : ISLAND OF SPETSES, GREECE**  
**Contact:** Prof. J.W.B. HERSHEY, DEPT. OF BIOLOGICAL CHEMISTRY, SCHOOL OF MEDICINE, UNIV. OF CALIFORNIA, DAVIS, CA 95616 USA (fax: 1 916 752 3516) 940860

### GENERAL

**REGULATION OF CELL GROWTH, DIFFERENTIATION AND GENETICS IN CANCER**

**1-12 Sep 1995 : PORTO CARRAS, GREECE**  
**Contact:** Prof. A.S. TSIFTSOGLU, ARISTOTLE UNIV. OF THESSALONIKI, SCHOOL OF HEALTH SCIENCES, DEPT. OF PHARMACEUTICAL SCIENCES, THESSALONIKI 540 06 GREECE (fax: 30-31-200392) 931322

**CURRENT ADVANCES IN GENETICS, METABOLISM AND APPLICATION OF LACTIC ACID BACTERIA**

**10-22 Sep 1995 : KUSADASI, TURKEY**  
**Contact:** Prof. F. BOZOGLU, MIDDLE EAST TECHNICAL UNIV., DEPT. OF FOOD ENGINEERING, ANKARA 06531, TURKEY (e-mail: bozoglul@rorqual.cc.metu.edu.tr) 931267

#### PHYSICS AND CHEMISTRY

**PHYSICS OF BIOMATERIALS: FLUCTUATIONS, SELF-ASSEMBLY AND EVOLUTION**

**27 Mar-6 Apr 1995 : GEILO, NORWAY**  
**Contact:** Prof. T. RISTE, INST. FOR ENERGITEKNIKK, P.O. BOX 40, N-2007 KJELLER, NORWAY (fax: 47 0681 0920/e-mail: gerd@ife.no) 940536

**LOCALIZED AND ITINERANT MOLECULAR MAGNETISM : FROM MOLECULAR ASSEMBLIES TO THE DEVICES**

**23 Apr-4 May 1995 : PUERTO DE LA CRUZ, SPAIN**  
**Contact:** Prof. E. CORONADO, UNIV. DE VALENCIA, DEPT. QUIMICA INORGANICA, DOCTOR MOLINER 50, 46100 BURJASOT SPAIN (fax: 34 6 386 43 22/e-mail: coronado@vm.ci.uv.es) 940508

**QUANTUM OPTICS OF CONFINED SYSTEMS**

**23 May-2 June 1995 : LES HOUCHEs, FRANCE**  
**Contact:** Dr. M. DUCLOY, UNIVERSITE PARIS-NORD, LAB. DE PHYSIQUE DES LASERS, 93430 VILLETANEUSE, FRANCE (fax: 33 1 49 40 32 00) (NANO) 941315

**MOLECULAR PHYSICS AND HYPERSONIC FLOWS**

**28 May-3 Jun 1995 : MARATEA, ITALY**  
**Contact:** Prof. M. CAPITELLI, UNIV. OF BARI, DEPT. OF CHEMISTRY, VIA ORABONA 4, 70126 BARI, ITALY (fax: 39 080 242024) 940475

**CRYSTALLOGRAPHY OF SUPRAMOLECULAR COMPOUNDS**

**1-11 Jun 1995 : ERICE, ITALY**  
**Contact:** Dr. G. TSOUCARIS, UNIVERSITE PARIS-SUD, CNRS-UPR180, CENTRE PHARMACEUTIQUE, 92290 CHATENAY-MALABRY FRANCE (fax: 33 1 4683 1303) 941065

**PHYSICS AND CHEMISTRY OF LOW-DIMENSIONAL INORGANIC CONDUCTORS**

**12-23 Jun 1995 : LES HOUCHEs, FRANCE**  
**Contact:** Prof. C. SCHLENKER, CNRS-LEPES, BP166, 38042 GRENOBLE CEDEX 9, FRANCE (fax: 33 76 88 79 88/e-mail: scgkebj@lepes.polycnrs-gre.fr) 940487

**SPECTROSCOPY AND DYNAMICS OF COLLECTIVE EXCITATIONS IN SOLIDS**

**17 Jun-1 Jul 1995 : ERICE, ITALY**  
**Contact:** Prof. B. DI BARTOLO, BOSTON COLLEGE, DEPARTMENT OF PHYSICS, CHESTNUT HILL, MA 02167, USA (fax: 1 617/552 8478/e-mail: kyrkos@BCVMS.BC.EDU) 940439



## ADVANCED STUDY INSTITUTES (continued)

### LARGE CLUSTERS OF ATOMS AND MOLECULES

18-30 Jun 1995 : **ERICE, ITALY**

**Contact:** Dr T.P. MARTIN, MPI FESKTOPERFORSCHUNG, HEISENBERGSTR 1, 70569 STUTTGART, GERMANY  
(fax 49 711 689 1010 /e-mail martin@vaxff3.mpi-stuttgart.mpg.de) (NANO) 940418

### PHOTONIC BAND GAP MATERIALS

19-30 Jun 1995 : **ELOUNDA, CRETE, GREECE**

**Contact:** Prof. C.M. SOUKOULIS, IOWA STATE UNIV., DEPARTMENT OF PHYSICS, AMES, IA 50011, USA  
(fax: 1 515-294-0689/e-mail: soukoulis@ameslab.gov) 940447

### NEW PERSPECTIVES IN LASER SOURCES AND APPLICATIONS

25 Jun-9 Jul 1995 : **ST ANDREWS, UK**

**Contact:** Prof. A. MILLER, UNIV. OF ST ANDREWS, DEPT OF PHYSICS & ASTRONOMY, NORTH HAUGH, ST ANDREWS, FIFE KY16 9SS, UK  
(fax: 44 334 463104) 941080

### QUANTUM FLUCTUATIONS

27 Jun-28 Jul 1995 : **LES HOUCHEs, FRANCE**

**Contact:** Dr. S. REYNAUD, UNIVERSITE P. ET M. CURIE, LAB. DE SPECTROSCOPIE HERTZienne DE ENS, CASE 74, 4 PL JUSSIEU 75252 PARIS CEDEX 05, FRANCE  
(fax: 44 27 38 45) 940540

### HADRON SPECTROSCOPY AND THE CONFINEMENT PROBLEM

3-14 Jul 1995 : **SWANSEA, UK**

**Contact:** Prof. D.V. BUGG, QUEEN MARY & WESTFIELD COLLEGE, LONDON, MILE END RD., LONDON E1 4NS, UK  
(fax: 44 81 981 9465) 941073

### LOW DIMENSIONAL APPLICATIONS OF QUANTUM FIELD THEORY

10-28 Jul 1995 : **CARGESE, CORSICA, FRANCE**

**Contact:** Dr. L. BAULIEU, UNIVERSITE P. & M. CURIE PARIS VI, LPTHE, T. 16 1 ETAGE, 4 PL JUSSIEU, 75252 PARIS CEDEX 05, FRANCE  
(fax: 1 44 27 70 88/e-mail: baulieu@ipthe.jussieu.fr) 941082

### GENERAL RELATIVITY

16-29 Jul 1995 : **ABERDEEN, UK**

**Contact:** Dr. G.S. HALL, UNIV. OF ABERDEEN, DEPT. OF MATHEMATICAL SCIENCES, ABERDEEN, UK  
(fax: 44 224 272607) 940498

### QUANTUM SYMMETRIES

1-8 Aug 1995 : **LES HOUCHEs, FRANCE**

**Contact:** Prof. J. ZINN-JUSTIN, CEA-CEN SACLAY, SERVICE DE PHYSIQUE THEORIQUE, F-91191 GIF-SUR-YVETTE CEDEX, FRANCE  
(fax: 33 1 69 08 81 20) 940543

### SOLVENTS AND SELF-ORGANIZATION OF POLYMERS

1-13 Aug 1995 : **CESME-IZMIR, TURKEY**

**Contact:** Prof. S.E. WEBBER, UNIV. OF TEXAS AT AUSTIN, DEPT. OF CHEMISTRY & BIOCHEMISTRY, AUSTIN, TX 78712, USA  
(fax: 1 512 471 86 96/e-mail: cmsew@utxdp.dp.utexas.edu) 940496

### FUNDAMENTALS AND APPLICATIONS OF GAS-PHASE ION CHEMISTRY

7-18 Aug 1995 : **GARMISCH. PARTENKIRCHEN, GERMANY**

**Contact:** Prof. K.R. JENNINGS, UNIV. OF WARWICK, DEPT OF CHEMISTRY, COVENTRY CV4 7AL, UK  
(fax: 44 203 524 112/e-mail: msrhy@snow.csv.warwick.ac.uk) 940531

### QUANTUM TRANSPORT IN SEMICONDUCTOR SUBMICRON STRUCTURES

20 Aug-1 Sep 1995 : **BAD LAUTERBERG, GERMANY**

**Contact:** Prof. B. KRAMER, UNIVERSITAT HAMBURG, INST. FUER THEORETISCHE PHYSIK, JUNGIUSSTRASSE 9, 20355 HAMBURG, GERMANY  
(fax: 49 40 4123 6571) (NANO) 931603

### LOW TEMPERATURE MOLECULAR SPECTROSCOPY

3-15 Sep 1995 : **SINTRA, PORTUGAL**

**Contact:** Prof. R. FAUSTO, UNIV. OF COIMBRA, CHEMICAL DEPT, 3049 COIMBRA, PORTUGAL  
(fax: 351 39 27703/e-mail: fcofmrui@ciuc2.uc.pt) 940320

### STRING GRAVITY AND PHYSICS AT THE PLANCK ENERGY SCALE

3-15 Sep 1995 : **ERICE, ITALY**

**Contact:** Prof. N. SANCHEZ, OBSERVATOIRE DE PARIS DEMIRM, 61 AVE. DE L'OBSERVATOIRE, 75014 PARIS, FRANCE  
(fax: 33 1 4051 2002/e-mail: chalange@mesioib.obspm.circe.fr) 940366

### NEW TRENDS IN MATERIALS CHEMISTRY

10-23 Sep 1995 : **IL CIOCCO, ITALY**

**Contact:** Prof. C.R.A. CATLOW, THE ROYAL INSTITUTION, LONDON, 21, ALBEMARLE STREET, LONDON W1X 4BS, UK  
(fax: 44 71 629 3569) 941105

### ASTRONOMY AND ASTROPHYSICS

#### SOLAR AND ASTROPHYSICAL MAGNETOHYDRODYNAMICS

11-22 Jun 1995 : **FODELE, CRETE, GREECE**

**Contact:** Prof. K. TSINGANOS, UNIV. OF CRETE, DEPT. OF PHYSICS, HERAKLION, CRETE, GREECE  
(fax: 30 81 239735/e-mail: tsingan@esl.forth.gr) 940469

#### THERMONUCLEAR SUPERNOVAE

19-30 Jun 1995 : **SITGES, SPAIN**

**Contact:** Prof. R. CANAL, UNIV. DE BARCELONA, DEPART. ASTRONOMIA I METEOROLOGIA, AVDA DIAGONAL 647, E-08028 BARCELONA, SPAIN (fax: 34 3 4021133) 941014

#### EVOLUTIONARY PROCESSES IN BINARY STARS

10-21 Jul 1995 : **CAMBRIDGE, UK**

**Contact:** Dr. J.E. PRINGLE, UNIV. OF CAMBRIDGE, INST. OF ASTRONOMY, MADINGLEY RD., CAMBRIDGE CB3 0HA, UK  
(fax: 44 223 337523) 940467

### MATHEMATICS

#### MATHEMATICAL MODELS IN CLIMATOLOGY AND ENVIRONMENT

11-21 Jan 1995 : **PUERTO DE LA CRUZ, SPAIN**

**Contact:** Prof. J.I. DIAZ, UNIVERSIDAD COMPLUTENSE DE MADRID, DPT. DE MATEMATICA APLICADA, 28040 MADRID, SPAIN  
(fax: 34 1 394 46 07/e-mail: j.i.diaz@mat.ucm.es) 940509

#### HAMILTONIAN SYSTEMS WITH SYSTEMS WITH THREE OR MORE DEGREES OF FREEDOM

19-30 Jun 1995 : **BARCELONA, SPAIN**

**Contact:** Prof. C. SIMO, UNIVERSITAT DE BARCELONA, DPT. DE MATEMATICA APLICADA I ANALISI, GRAN VIA 585, 08007 BARCELONA SPAIN (fax: 34 3 4021601/e-mail: carles@MAIA.UB.ES) 940463

#### GAUGE THEORY AND SYMPLECTIC GEOMETRY

3-14 Jul 1995 : **MONTREAL, CANADA**

**Contact:** Prof. A. DAIGNEAULT, UNIVERSITE DE MONTREAL, DEP. DE MATH. & DE STATISTIQUE, C.P. 6128, SUCC. A, MONTREAL, P.Q. H3C 3J7, CANADA  
(fax: 1 514 343 5700/e-mail: daigneau@ere.umontreal.ca) 940867

#### FRACTAL IMAGE ENCODING AND ANALYSIS

8-17 Jul 1995 : **TRONDHEIM, NORWAY**

**Contact:** Dr. Y. FISHER, UNIV. OF CALIFORNIA AT SAN DIEGO, INST. FOR NONLINEAR SCIENCE 0402, LA JOLLA, CA 92093-0402, USA  
(fax: 1 619 534 76 64/e-mail: YFISHER@UCSD.EDU) 940523

#### THE MATHEMATICS OF LONG-RANGE APERIODIC ORDER

21 Aug-1 Sep 1995 : **TORONTO, CANADA**

**Contact:** Prof. R.V. MOODY, UNIV. OF ALBERTA, DEPT. OF MATHEMATICS, EDMONTON, ALBERTA T6G 2G1, CANADA  
(fax: 1 403 492 6826/e-mail: RVM@JAZZ.MATH.UALBERTA.CA) 940479

#### FROM FINITE TO INFINITE DIMENSIONAL DYNAMICAL SYSTEMS

21 Aug-1 Sep 1995 : **CAMBRIDGE, UK**

**Contact:** Dr. P.A. GLENDINNING, UNIV. OF CAMBRIDGE, DEPT. OF APPLIED MATHS & THEORET. PHYSICS, SILVER STREET, CAMBRIDGE CB3 9EW, UK (fax: 44 223 337918) 941038

### COMPUTER AND SYSTEMS SCIENCES

#### HARDWARE/SOFTWARE CO-DESIGN

19-30 Jun 1995 : **TREMEZZO, ITALY**

**Contact:** Prof. M.G. SAMI, POLITECNICO DI MILANO, DIP. DI ELETTR. E INFORMAZIONE, PZZA L. DA VINCI 32, 20133 MILANO, ITALY  
(fax: 39 2 23 99 34 11/e-mail: sami@ipmell.polimi.it) 940497

#### LOGIC OF COMPUTATION

25 Jul-6 Aug : **MARKTOBERDORF, GERMANY**

**Contact:** Prof. M. BROJ, TECHNISCHE UNIVERSITAT MUNCHEN, INSTITUT FUR INFORMATIK, 80290 MUNCHEN, GERMANY  
(fax: 49 80 2105 8183) 941062

### APPLIED SCIENCES AND ENGINEERING

#### COMPUTER SIMULATION IN MATERIALS SCIENCE: NANO/MESO/MACROSCOPIC SPACE AND TIME SCALES

6-16 Jun 1995 : **ILE D'OLERON, FRANCE**

**Contact:** Prof. H.O.K. KIRCHNER, UNIVERSITE PARIS-SUD, INST. DE SCIENCES DES MATERIAUX, BAT. 413, 91405 ORSAY, FRANCE  
(fax: 33 1 69 41 7833/e-mail: KIRCHNER@MIRTO.POLYTECHNIQUE.FR) 941036

#### CURRENT ISSUES AND CHALLENGES IN THE RELIABILITY AND MAINTENANCE OF COMPLEX SYSTEMS

12-22 Jun 1995 : **ANTALYA, TURKEY**

**Contact:** Prof. S. OZEKICI, BOGAZICI UNIV., DEPT OF INDUSTRIAL ENGINEERING, BEBEK, 80815 ISTANBUL, TURKEY  
(fax: 90 212 265 18 00/e-mail: ozekici@hisar.cc.boun.edu.tr) 940516

### SQUID SENSORS : FUNDAMENTALS, FABRICATION AND APPLICATIONS

18-30 Jun 1995 : **MARATEA, ITALY**

**Contact:** Dr. H. WEINSTOCK, AIR FORCE OFFICE OF SCIENTIFIC RESEARCH, AFOSR/NE, BOLLING AFB, 110 DUNCAN AVE., STE B115 WASHINGTON, DC 20332-0001, USA  
(fax: 1 202 767 4986/e-mail: weinstoc@afosr.af.mil) 940515

### ADVANCES IN RAPID THERMAL AND INTEGRATED PROCESSING

3-14 Jul 1995 : **MARATEA, ITALY**

**Contact:** Dr. F. ROOZEBOOM, PHILIPS RESEARCH LABORATORIES, PROF. HOLSTLAAN 4, NL-5656 AA EINDHOVEN, NETHERLANDS  
(fax: 31 40 74 42 82/e-mail: roozeboo@prl.philips.nl) 940503

### SILICON-GERMANIUM HIGH SPEED ELECTRONICS - FROM BASIC PHYSICS TO APPLICATIONS

13-25 Jul 1995 : **ERICE, ITALY**

**Contact:** Prof. A.R. PEAKER, UMIST, CENTRE FOR ELECTRONIC MATERIALS, PO BOX 88, MANCHESTER M60 1QD, UK  
(fax: 44 61 200 4770/e-mail: PEAKER@UMIST.AC.UK) 941115

### RING-OPENING METATHESIS POLYMERIZATION OF OLEFINS AND POLYMERIZATION OF ALKYNES

3-16 Sep 1995 : **BALIKESIR, TURKEY**

**Contact:** Prof. Y. IMAMOGLU, HACETTEPE UNIV., DEPT. OF CHEMISTRY, INORGANIC CHEM. SECTION, 06532 BEYTEPE/ANKARA, TURKEY (fax: 0312 2352575/e-mail: K\_CETIN@TRHUN) 941101

### BIOMEDICAL CLINICAL INSTRUMENTATION AND LASER-ASSISTED BIOTECHNOLOGY

12-24 Nov 1995 : **ERICE, ITALY**

**Contact:** Dr. A. SCHEGGI, CNR, ISTO DI RICERCA S. ONDE ELETTROMAGNET., VIA PANCIATICHI 64, 50127 FLORENCE ITALY  
(fax: 39 55 4379569) 941134

### ENVIRONMENTAL SCIENCES

#### DECADAL CLIMATE VARIABILITY: DYNAMICS & PREDICTABILITY

13-24 Feb 1995 : **LES HOUCHEs, FRANCE**

**Contact:** Dr. D. ANDERSON, UNIV. OF OXFORD, CLARENDON LAB. THEORETICAL PHYSICS DEPT., PARKS RD., OXFORD OX1 3PU, UK  
(fax: 44 865 272923/e-mail: atmdlta@vax.ox.ac.uk) (SGEC) 940443

#### REMOTE SENSING OF PROCESSES GOVERNING ENERGY AND WATER CYCLES IN THE CLIMATE SYSTEM

1-12 May 1995 : **PLOEN, GERMANY**

**Contact:** Prof. E. RASCHKE, GKSS-RESEARCH CENTRE, INST. FOR PHYSICS P2, MAX-PLANCK-STRASSE, 21502 GEESTHACHT GERMANY  
(fax: 49 4152 87 18 88/e-mail: raschke@dvmc10.gkss.de) 931609

#### THE STRATOSPHERE AND ITS ROLE IN THE CLIMATE SYSTEM

4-15 Sep 1995 : **VAL MORIN, QUEBEC, CANADA**

**Contact:** Dr. G.P. BRASSEUR, NATIONAL CENTRE FOR ATMOSPHERIC RESEARCH, PO BOX 3000, BOULDER, CO 80307, USA  
(fax: 1 303 497 1415/e-mail: brasseur@ncar.ucar.edu) 940589

#### SOLAR ULTRAVIOLET RADIATION MODELLING, MEASUREMENTS AND EFFECTS

2-12 Oct 1995 : **THESSALONIKI, GREECE**

**Contact:** Prof. C.S. ZEREFOS, UNIV. OF THESSALONIKI, LAB. OF ATMOSPHERIC PHYSICS, 54006 THESSALONIKI, GREECE  
(fax: 30 31 283752/e-mail: zerefos@olymp.ccf.auth.gr) (SGEC) 931678

### SOCIAL AND BEHAVIOURAL SCIENCES

#### MONITORING A COMPREHENSIVE TEST BAN TREATY

23 Jan-2 Feb 1995 : **FARO, PORTUGAL**

**Contact:** Prof. E.S. HUSEBYE, BERGEN UNIV., INST. OF SOLID EARTH PHYSICS, ALLEGATAN 41, 5007 BERGEN NORWAY  
(fax: 47 55 32 00 09/e-mail: eystein.husebye@ifj.uib.no) 940522

#### PSYCHOPATHY: THEORY, RESEARCH AND IMPLICATIONS FOR SOCIETY

15-24 May 1995 : **PRAIA DO ALVOR, PORTUGAL**

**Contact:** Prof. R.D. HARE, UNIV. OF BRITISH COLUMBIA VANCOUVER, DEPT OF PSYCHOLOGY, 2136 WEST MALL, VANCOUVER, BC V6T 1Z4 CANADA  
(fax: 1 604 822 6923) 941125

#### SPEECHREADING BY MAN AND MACHINE: MODELS, SYSTEMS AND APPLICATIONS

19-30 Jun 1995 : **LES ARCS, FRANCE**

**Contact:** Dr. D.G. STORK, RICOH CALIFORNIA CTR, 2882 SAND HILL ROAD, SUITE 115, MENLO PARK, CA 94025-7022, USA  
(fax: 1 415 854 8740/e-mail: STORK@CRC.RICOH.COM) 940584

#### BIOSECURITY BASES OF VIOLENCE: THEORY AND RESEARCH

4-13 July 1995 : **ALVOR, PORTUGAL**

**Contact:** Dr. A. RAINE, UNIV. OF S. CALIFORNIA, SOCIAL SCIENCE RESEARCH INST., LOS ANGELES, CA 90089-1111, USA  
(fax: 1 213-740-7778) 940530

*Note:* The codes CHEM, SGEC, NANO indicate meetings supported under the Special Programmes on Supramolecular Chemistry; Science of Global Environmental Change; and Nanoscale Science.

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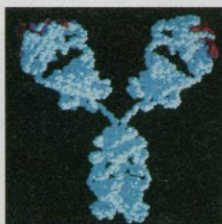
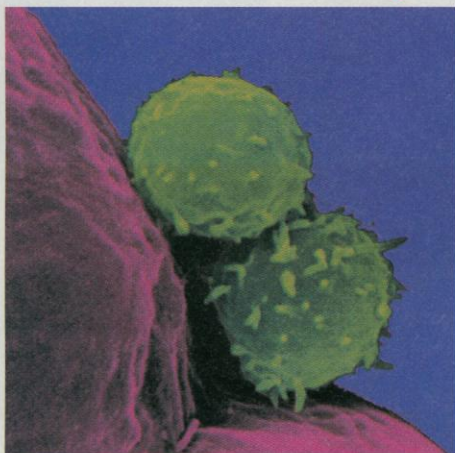
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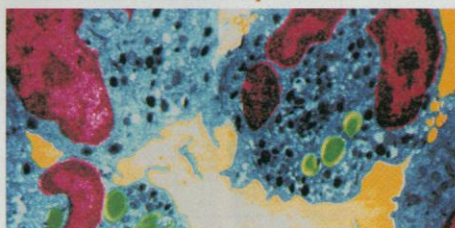
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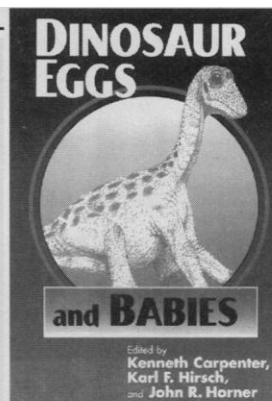
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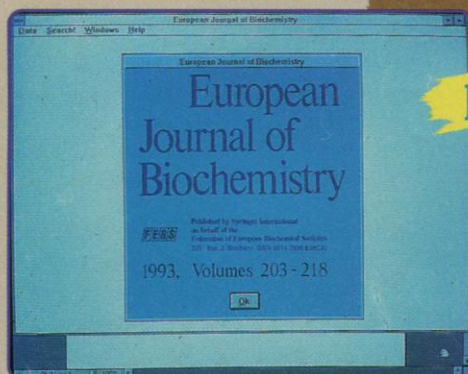
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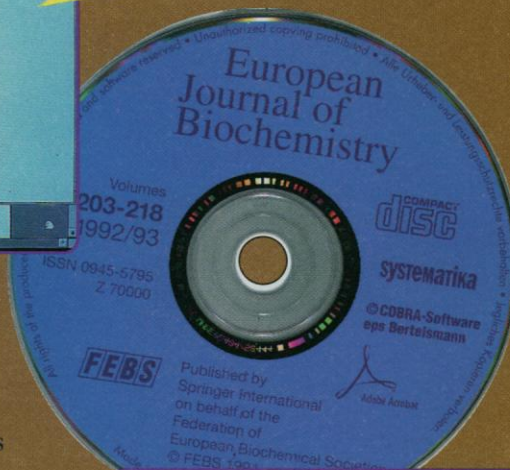
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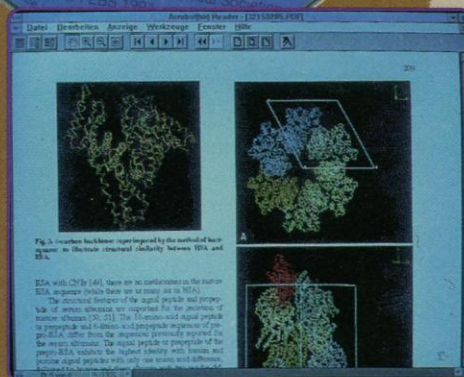
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