

initial experiments on CO<sub>2</sub> laser interactions with foils presented. On the theoretical side it was shown that two existing theories needed modification. The inclusion of plasma correlations into the theory of Compton scattering in a plasma was found to introduce a peak in the transmitted radiation, compatible with experimental results. The ponderomotive force structure was calculated with reflections included, and found to produce a periodic density distribution but no overall dynamical effects in a model plasma.

Various aspects of the diagnostics and interpretation of pico-second phenomena associated with mode-locked lasers were discussed by D. J. Bradley (Belfast) and M. Duguay (Bell Telephone Laboratories). Plasma diagnostics by scattering of laser radiation was discussed for several applications including the measurement of magnetic fields and the observation of turbulence in collision-free shocks. The first reports of CO<sub>2</sub> laser scattering from plasmas were given by C. Yamana (Osaka), M. Kornherr (Garching) and A. Offenberger (Alberta).

The meeting was attended by about 100 people. Representation from most of the major laboratories ensured that all the important topics were covered and that useful discussions were held on the state of the art and possible future developments.

**G. J. Pert**

The first Europhysics Conference on a condensed-state topic and organized by the **Condensed Matter Division** took place on 15-19 June 1970 at Marstrand, a granite island off the Swedish west coast. Under the title "Atomic Transport in Solids and Liquids" it covered three main areas: force-biased phenomena (electro- and thermotransport, fluotransport, centrifuge studies); isotope and correlation effects; pressure dependence of atomic mobility.

The organizers, A. Lodding and T. Lagerwall, both from Gothenburg, were assisted by the following Advisory Committee:

Y. Adda,	Saclay
V. B. Fiks,	Leningrad
Th. Heumann,	Münster
H. B. Huntington,	Troy
A. Klemm,	Mainz
D. Lazarus,	Urbana
A. D. Leclaire,	Harwell
R. A. Swalin,	Minneapolis
H. Wever,	Berlin

The 99 participants represented nine European and three overseas countries. The Proceedings have been published; for details see p. 8.

**G. A. Sullivan**

# Atomic Physics Division

**H. van Regemorter**  
**G. W. Series**

The Atomic Physics Division, established by the Council in March 1971, provides a place in the EPS for those whose interests lie in the physics of atoms, ions or molecules, their structure and spectra, their interactions with electrons and other particles and their interactions with radiation. The emphasis is on individual, as opposed to collective processes. To some extent these interests are already served by the Atomic Spectroscopy Division, and there is also a good deal of common ground with Plasma Physics, Quantum Electronics and Physics in Astronomy. But large areas of atomic and molecular physics — the physics of atomic collisions and molecular spectroscopy, for example — had been, until now, unrepresented in the EPS. The new Division hopes to serve such recognized fields of physics as these, but also to work on the boundaries and in the regions between them: to provide a place where the collisions people, for example, can meet the optical pumpers or where the spectroscopists can take their expertise into neighbouring domains. Indeed, the study of atoms and molecules through their interaction with radiation inevitably forges links with optics, and physicists in this field may, in the course of time, find in the Atomic Physics Division their natural place in the EPS.

Whereas in the case of some Divisions the conferring of Divisional status by the EPS represented a form of recognition of groups which already existed, the establishment of the Atomic Physics Division creates something new. It is true that there exist in Europe some national groups concerned with atomic and molecular physics as well as with atomic and electronic collisions; further, more specialized topics such as molecular spectroscopy, atomic beams and optical pumping have been the subjects of international conferences in Europe. But the wider field has hitherto not been represented by a European organization. The new Division of EPS fills this gap.

To many people it was surprising that a Division on these lines was not

established by the EPS Council in 1969 when the first five Divisions were announced. But the policy of the Council is to form Divisions only on the basis of the formal applications received, and, at the time, no group of people had submitted a proposal for an Atomic Physics Division. Subsequent discussion among interested persons led to a meeting of individuals drawn from many parts of Europe and representing different branches of atomic and molecular physics on the occasion of an International Conference on Atomic Physics in Oxford in July 1970. At that meeting a formal proposal to set up the Division was agreed and a committee was appointed to serve as a provisional Board until an elected Board could take office. The proposal was in due course accepted by EPS Council and the provisional Board met first in Amsterdam on 29 July 1971.

Members of this Board are:

J. Badoz,	Paris
H. Ehrhardt,	Kaiserslautern
N. V. Fedorenko	Leningrad
J. Kistemaker,	Amsterdam
I. Kovacs,	Budapest
M. J. Seaton,	London
G. W. Series (Secretary),	Reading
K. Siegbahn,	Uppsala
T. Skalinski,	Warsaw
A. Steudel,	Hannover
H. van Regemorter,	Meudon
(Chairman)	

In addition, G. zu Putlitz (Heidelberg) has been invited to attend the meetings.

At its first meeting the Board had before it some proposals for conferences on specialized topics, and it is hoped that these will ultimately take shape under the auspices of the EPS. The Board also considered at some length the forthcoming General Conference of the EPS at Wiesbaden, 3-6 October 1972, where, together with other Divisions, the Atomic Physics Division will contribute to the scientific programme.

At a second meeting the Board decided to set up Sections, the first of which will be a Section on Molecular Spectroscopy for which the nucleus already exists. Steps have also been

taken to set up a Section on Electronic and Atomic Collisions. It is envisaged that the greater part of the work of the Division will ultimately be carried out in Sections, but the Board itself will be responsible for organizing meetings on topics falling outside the Sections or across their boundaries.

The Wiesbaden Conference provides an opportunity for EPS members to express an interest in the Atomic Physics Division and to make known their views on what its activities should be. The Board hopes to arrange a general meeting to be held during the Conference. Before the Conference it will have worked out machinery for conducting elections, either by post or otherwise, so that an elected Board can thereafter assume responsibility for the work of the Division. Individual Ordinary Members of the EPS are entitled to vote in such elections; for them a questionnaire on membership in the Atomic Physics Division is attached to this copy of Europhysics News and should be returned to the Secretariat in Geneva. Physicists who are not Individual Ordinary Members of the EPS are invited to consider membership if the existence of the new Division is of interest to them. The Secretary of the Atomic Physics Division would be glad to register also the names of members of Societies affiliated to EPS interested in the activities of the Division. They should address their enquiries to: Professor G. W. Series, Department of Physics, University of Reading, Whiteknights, Reading RG6 2AF, UK.

In addition, Members of the Board will be happy to receive and to consider suggestions for meetings or proposals for other activities which fall within the scope of the Division.

#### Ultrasonics

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**Ultrasonics** is the world's only journal devoted entirely to the properties, effects and applications of ultrasound. Each issue contains: articles on the uses of ultrasonic materials, equipment and techniques; research papers on the properties and effects of ultrasound; technical notes on the latest research and development; details of new products and equipment; abstracts and titles of ultrasonics literature from the world's journals and patents publications. One-year subscription (four issues) £ 10.00 (\$ 25.00) from **IPC Science and Technology Press**, 32 High Street, Guildford, Surrey, England.

## ATOMIC TRANSPORT IN SOLIDS AND LIQUIDS

Proceedings of the Europhysics Conference  
held at Marstrand, Sweden, 1970

Editors: A. Lodding and T. Lagerwall

Sixty invited papers by international first rank specialists, giving a "state of science" review of the field and the present trends in theory and experiment, as well as technological applications. Modern aspects of atomic mobility and defect mechanisms in metals, semiconductors and ionic media are discussed with the aim to unite physical and chemical approaches and to coordinate forthcoming research.

Publication date: October-November 1971.

About 420 pages, 20 x 26 cm. Price: DM 120.—.

Verlag der Zeitschrift für Naturforschung  
Uhlandstrasse 11, D-7400 Tübingen, Germany

## Europhysics News

Volume 2 of Europhysics News is now complete. It comprises the following issues published during 1971:

No. 1	January/February
No. 2	March
No. 3	April/May
No. 4 ( <i>Meetings Issue</i> )	Spring
No. 5	June/July
No. 6	August/September
No. 7	October/November
No. 8 ( <i>Meetings Issue</i> )	Autumn
No. 9	December

An index of Volume 2 will be published early in 1972.

## Meetings

Notification of the following meetings has been received. The meetings announced are in addition to those advertised in previous issues of Europhysics News. Those organized by Divisions of the EPS are printed in bold type and boxed; those sponsored by the EPS are printed in bold type; Europhysics Conferences (see Meetings Issue 2 (12 M) of Europhysics News) are marked by an  $\ominus$  preceding the date. These announcements are repeated. For a full list of events see the latest Meetings Issue of Europhysics News. The information is listed in this order: Date, title, venue, contact for information.

## Conferences 1972

### 11 January

Séminaires de Chimie de l'Etat Solide

— Phase Diagrams and Stoichiometry

France

J. Suchet, Boite postale 62, F-92 Clamart

### 16 February

Anodic Films

Birmingham, UK

R. W. Fane, The University of Aston

in Birmingham, Gosta Green, Birmingham 4

### 20-24 March

International Meeting on Hydrogen in Metals

Jülich, Federal Republic of Germany

J. Völk, Institut für Festkörperforschung der

Kernforschungsanlage, Postfach 365,

D-517 Jülich

### 20-25 March

Kernphysik, Elektronik im physikalischen

Experiment

Berlin, Federal Republic of Germany

D. Hahn, Abbestrasse 2-12, D-1 Berlin 10

### 20-25 March

Plasmaphysik, Kurzzeitphysik, Quantenoptik

Kiel, Federal Republic of Germany

J. Richter, Olshausener Strasse 40-60,

Haus 20, D-23 Kiel

### 27-29 March

Ferroelectrics and their Applications

Edinburgh, Scotland, UK

The Meetings Officer, The Institute of Physics,

47 Belgrave Square, London SW1X 8QX

### 5-6 April

Hyperfine Interactions

Manchester, UK

M. A. H. McCausland, Department of Physics,

The University, Manchester M13 9PL

### 5-7 April

4th International Conference on High Energy

Collisions (Stonybrook Series)

Oxford, UK

G. Manning, Rutherford High Energy Laboratory,  
Chilton, Didcot, Berkshire

### 6-8 April

EPS Low Temperature Conference

Freudenstadt, Fed. Republic of Germany

H. Hirsch, Institut für Angewandte Physik,

Albert-Uberle-Str. 3/5, D-69 Heidelberg

## EPS General Conference

### 3-6 October

Trends in Physics

Wiesbaden, Federal Republic of Germany

U. Döhle, Physikalisches Institut der

Universität, Robert Mayer Strasse 2-4,

D-6000 Frankfurt/Main

We regret that some announcements of EPS organized or sponsored meetings had to be held over owing to lack of space.

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