Laser Lines

We represent many of the world's leading manufacturers of lasers and high technology equipment.

Aerotech
Anorad
Apollo Lasers
California Laser
Cleveland Crystals
Coherent
Corion
General Photonics
General Scanning
Glendale
ILC Technology
ILS
Isomet

Kigre

Laser Diode Labs
Laser Optronic
Liconix
Lincoln Laser
Molectron
Optel
Polytec
Quante
Sage
Spiricon
Technical Optics
Uniphase
Zimmer

LASERS

Helium Neon
Helium Cadmium
Industrial CO₂
Tunable CO₂/CO/N₂O
Waveguide CO₂
Far Infrared
Pulsed Glass/Ruby
Pulsed YAG
CW YAG
Nitrogen
N₂/YAG Pumped Dye
Semiconductor Lasers/LED's

LASER SYSTEMS

Resistor Trimmers
Laser Writers
Laser Scribers
Laser Drillers/Welders
Laser Micro-soldering
Communications Systems
Doppler Velocimeters
Dual Focus Velocimeters
Rangefinders/Designator
IR Illuminators
Fibre-optics/Communications

LASER COMPONENTS

YAG Laser Glass Harmonic Generators Pockels Cells Flashlamps Krypton Lamps Waveplates A/O Modulators Cavity Assemblies

SAFETY EQUIPMENT

Goggles/Safety Film Laser Incidents Detector

OPTICAL INSTRUMENTS

Tunable Filters
Spectrum Analysers
Interferometers
Particle Size Analysers
Wire Diameter Monitors
Dimension Meters
Displacement Transducers

OPTICAL SCANNERS

Scanning Galvanometers Drive Electronics XY Mounts A/O Deflectors



OPTICS

UV/IR Mirrors CO₂ Laser Optics Filters Polarizers Metal Mirrors

ELECTRONIC TEST EQUIPMENT

Thermal Resistance Testers Die Attachment Evaluators Automatic Test Equipment

POSITIONING EQUIPMENT

Precision Mirror Mounts XYZ Positioning Tables Air Bearing Tables CNC Motor Controllers Rotary Tables Linear Motors/Tables

STRIP CHART RECORDERS

Packaged Recorders OEM Modules Pen Galvanometers

DETECTORS

Pyroelectric Calorimeters/Power Meters Quadrant Scanned Arrays

INSTRUMENT MOTORS

Stepper AC Synchronous

19 West Bar, Banbury, Oxon OX16 9SA Telephone: Banbury (0295) 57581 Telex: 83434 LL LTDG

OPTICS AND LASER TECHNOLOGY

Optics and Laser Technology is the international journal that bridges the research/ applications gap in the optics field. Catering for both the scientist developing new optical methods and the engineer wishing to use them.

Coverage includes:

- Display systems
- Fibre-optics and optical communications
- Holography and its applications
- Infra-red and ultra-violet technology
- Lasers and their applications
- Moire fringe techniques
- Opto-electronics
- Radiation detectors and sources
- Thin film and integrated optics
- Transform optics

For further details complete and return the coupon below

To: Christine Mulline	Buttenworth Scientific L	imited — Journals Division	PO Boy 63	Wostbury House	Bury Street
		Telephone: 0483 31261			buly Street
		S and LASER TECHNOLO			
Name					
Organisation and Addr	ess				
· ·					

The Journal of Plasma Physics

Editor. J. P. Dougherty, Lecturer in Applied Mathematics, University of Cambridge

The Journal of Plasma Physics publishes research into the behaviour and uses of ionized media. Both theoretical and experimental papers are published, including numerical investigations of theoretical problems. It also carries some book reviews.

Special Offer on Back Volumes' Subscriptions

We are offering a 331/3% discount on all back volumes of *The Journal of Plasma Physics*. The offer is current until 30th June 1983 and is subject to availability.

Volumes 1-28 (1967-1982) usual rate £60.00 per volume SPECIAL OFFER RATE £40.00 PER VOLUME

Volumes 1-4 were each issued in four parts, later volumes in three parts.

An index to Volumes 1-20 is free to subscribers.

Subscription

Volume 29: February, April and June 1983 Volume 30: August, October and December 1983

£67.50/\$177 per volume £135/\$354 per year Single parts: £25/\$66.50 Individuals rate (1983) £67.50/\$177

For further information please contact Journals Publicity at the address below. North American enquiries should be sent to Journals Promotion, Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022, U.S.A.

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England

Holographic and Speckle Interferometry

R. JONES and C. M. WYKES

A survey of two opto-electronic techniques of enormous potential, this book examines both the theoretical basis and practical applications of holographic and speckle interferometry. Interferometry allows lasers to make noncontacting field view measurement at a sensitivity of light on optically rough surfaces, and this in turn permits the accurate measurement of shape, displacement and refractive variation. There are many possible applications in the fields of strain and vibrational analysis, non-destructive testing, component inspection and design analysis, and fluid flow visualisation. The book will therefore be of value to practising scientists and engineers wishing to use interferometry as much as to existing students of the subject. £29.50/\$54.50

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU — 32 East 57th Street, New York, NY 10022

Information for Contributors

- Manuscripts must be written in English. All manuscripts will be referred to acknowledged experts in the subject. Only those receiving favourable recommendations from the referees will be accepted for publication. Manuscripts may be sent to any Board member, any Associate Editor or the Editor.
- 2. The typescript should be double spaced, on one side of good grade paper, allowing a reasonable left-hand margin. An original and two copies should be submitted with the author's full postal address, position and affiliations.
- 3. The title and section headings should highlight the significant points. A short abstract should precede the main text.
- 4. One copy of photographs, prints or transparencies of good quality and unmarked should be submitted. Where lines or lettering are to appear on the photograph, an additional print should be supplied appropriately marked. Each should have, lightly written on the back, the author's name, the figure number and an indication of which is the top of the picture.
- 5. One copy of each line diagram should be submitted at approximately twice final size and unlettered. Diagrams must be drawn in indian ink on plain white or transparent paper. A second copy should be supplied with lettering included. The author's name and the figure number should be written on this copy.
- 6. Tables should be typewritten on separate sheets. Avoid, where possible, very wide tables.
- 7. References should be cited in the text, according to the Harvard (Author/date system), but giving the last name of the author(s) followed by a comma and the year of publication e.g. DICKEN & LLOYD 1979; FLETCHER 1978. If there is more than one work by an author in a given year, then label them alphabetically within each year, e.g. HALL, 1967a. The full references should be typed, double-spaced, on a separate sheet of paper at the end of the article. They must include the names and initials of all the authors, the year of publication, the full title of the article (or book), the standard abbreviated name of the journal. SHEERIN, J. P. & ONG, R. S. B. 1980 J. Plasma Phys. 24, 157. WHITTAKER, E. T. & WATSON, G. N. 1962 A Course of Modern Analysis, p. 36. Cambridge University Press, Cambridge.
- 8. Correction to proofs should be restricted to printers' errors only. Authors are entitled to 25 offprints of their article free of charge. Additional offprints may be purchased if they are ordered on the form sent with the proofs.

LASER AND PARTICLE BEAMS

Volume 1 Part 1 February 1983

CONTENTS

Preface 1

- **K. I. Golden:** Strong ion coupling effects at high density of inertial confinement fusion plasmas 3
- **B. I. Henry:** Spectral line limiting and polarization shift in plasmas of high particle and energy density 11
- S. Nakai, K. Imasaki, S. Miyamoto, S. Higaki, T. Ozaki, A. Yoshinouchi, H. Fujita, K. Mima, K. Nishihara, T. Yabe, S. Ido, Y. Ohgaki and C. Yamanaka: Inertial confinement fusion research by particle beams at ILE Osaka 29
- P. Lädrach and J. E. Balmer: Self-consistent calculations of short-pulse laser-heated plasma dynamics 67
- C. B. Edwards and F. O'Neill: Computer modelling of e-beam-pumped KrF lasers 81
- **S. Eliezer and D. Salzmann:** Determination of atomic cross-sections for electron impact excitation using effective Feynman diagrams and Einstein coefficients 97

Book Reviews 103

FORTHCOMING PAPERS

- M. Tamba, N. Nagata, S. Kawata and K. Niu: Analysis of target implosion irradiation by proton beams I. Beam interaction with target plasma
- G. W. Kentwell: Conical two dimensional plasma acceleration at resonance absorption
- H. Hora: Electrostatic fields and charged particle acceleration in laser produced plasmas
- G. J. Tallents: Two-dimensional ion emission from laser-produced plasmas
- S. Kawata and K. Niu: Numerical simulations for intense light-ion beam propagation in a channel under the influence of plasma inertia
- D. D. Ryutov and G. V. Stupakov: Generation of high power beams by oscillating electrons
- N. G. Basov, A. E. Danilov, I. V. Kirsanova, Yu. A. Mikhailov, G. V. Sklizkov and S. I. Fedotov: Limits in brightness of ND-glass lasers for fusion
- N. F. Roderick, B. J. Kohn, W. F. McCullough, C. W. Beason, J. A. Lupo and J. D. Letterio: Theoretical modeling of electromagnetically imploded plasma liners
- C. W. Mendel Jnr, D. B. Seidel and S. E. Rosenthal: Magnetic insulation from basic physical considerations
- © Cambridge University Press 1983

Cambridge University Press, The Pitt Building, Trumpington Street, Cambridge CB2 1RP; 32 East 57th Street, New York, N.Y. 10022