

Information in the calendar is compiled from a file maintained in the PHYSICS TODAY office. Readers are invited to write or telephone for information beyond what we print. The date at the end of each item refers to the issue of PHYSICS TODAY in which the item is listed with more detail than appears in subsequent issues.

ABBREVIATIONS: APS, American Physical Society; OSA, Optical Society of America; ASA, Acoustical Society of America; S of R, Society of Rheology; AAPT, American Association of Physics Teachers; ACA, American Crystallographic Association; AAS, American Astronomical Society; AEC, US Atomic Energy Commission; IEEE, Institute of Electrical and Electronics Engineers; IPPS, The Institute of Physics and The Physical Society; IUPAP, International Union of Pure and Applied Physics; NBS, National Bureau of Standards; ORNL, Oak Ridge National Laboratory.

CODING of each item is as follows: date subject ☐ HOST ☐
Location (Contact) [submission deadline] PT ref.

• new listing ♦ new information

SEPTEMBER 1967

5-7 Quasars ☐ IPPS ☐ Manchester, England (Meetings Officer, IPPS) 4/67

5-8 Solid-State Devices ☐ IPPS ☐ Manchester, England (Meetings Officer, IPPS) 3/67

5-9 Molecular Structure and Spectroscopy ☐ OHIO STATE U. ☐ Columbus (K. N. Rao) 2/67

5-9 Electron and Photon Interactions at High Energies ☐ IUPAP-AEC ☐ Stanford (W. K. H. Panofsky) 3/67

5-9 Automatic Control Theory ☐ WASHINGTON U. ☐ St Louis (G. L. Esterson) 8/67

6-8 II-VI Semiconducting Compounds ☐ APS ☐ Providence, R. I. (D. W. Langer) 2/67

7-13 Nuclear Structure ☐ IUPAP ☐ Tokyo (I. Nonaka) 12/66

10-15 • Molecular Spectroscopy ☐ IUPAP ☐ Madrid (J. Morcillo, Consejo Superior de Investigaciones Cientificas, Serrano 117, Madrid 6) 9/67

10-16 Magnetism ☐ AIP-IUPAP ☐ Boston (J. S. Smart) 3/67

11-13 Plasma Waves ☐ IPPS ☐ Culham, England (Meetings Officer, IPPS) 7/67

11-13 Atomic Spectroscopy ☐ NBS ☐ Gaithersburg, Md. (K. G. Kessler) (by invitation) 3/67

11-14 • Instrumentation - Automation Conference and Exhibit ☐ INSTRUMENT SOCIETY OF AMERICA ☐ Chicago (W. V. Halle, Instrument Society of America, 530 William Penn Pl., Pittsburgh, Pa. 15219) 9/67

11-15 High Energy Accelerators ☐ CAMBRIDGE ELECTRON ACCELERATOR ☐ Cambridge, Mass. (M. S. Livingston) (by invitation) 12/66

13, 14 High Voltage Insulation in Vacuum ☐ IPPS ☐ (Meetings Officer, IPPS) [6/16] 2/67

13, 14 Electric Heating ☐ IEEE ☐ Detroit (W. Holcroft) 7/67

13, 14 Nuclear Magnetic Resonances in Solids ☐ BRITISH RADIOSPECTROSCOPY GROUP ☐ St Andrews, Scotland (F. A. Rushworth) 8/67

14-19 • Theoretical Physics ☐ TOKYO INSTITUTE OF TECHNOLOGY ☐ Tokyo (H. Fukuda, Physics Dept., Tokyo Institute of Technology, Tokyo) 9/67

17-20 High Temperature Technology ☐ STANFORD RESEARCH INSTITUTE ☐ Asilomar, Calif. (Dept. 366, Stanford Research Institute) 5/67

18, 19 • Accelerator Targets, Liege, Belgium (M. S. Godar, Radioisotope Group, Dir.-Gen. Research and Training, 51-53 rue Belliard, Bruxelles 4, Belgium) 9/67



DYNAFAX MODEL 350 records 224 frames at rates from 200 to 35,000 frames per second.



DYNAFAX MODEL 351 streak camera records at rates up to 0.13mm per microsecond with time resolution of 0.4×10^{-6}



DYNAFAX MODEL 364 oscilloscope camera provides maximum time resolution of 0.4 microseconds or a frequency response of 0.85 Mega Hz.



SUPER DYNAFAX MODEL 317 records forty-six 35mm frames at rates continuously variable from 500 to 16,100 pictures per second.



SUPER DYNAFAX MODEL 318 streak camera records at rates up to 0.306mm per microsecond with time resolution of 1.8×10^{-7} seconds.



SUPER DYNAFAX MODEL 319 oscilloscope camera provides maximum time resolution of 1.8×10^{-7} seconds or a frequency response of 1.9 Mega Hz.



The ultra-thin ΔE detector has arrived.

Optically flat, microscopically smooth Si detectors in thicknesses from less than 10 to 75 μ are now a commercial reality. Sound interesting? Linger with us here a moment.

Inadequate precision in ΔE detector geometry has undoubtedly been responsible for many disappointing experiments. Worse yet, the unavailability of suitable detectors has probably discouraged a small mountain of experimental ideas. Would it be excessive, then, to suggest that Ortec's new line of ΔE detectors will substantially widen the horizon of low-energy nuclear studies? On the basis of the data below, things look promising.

Our level best

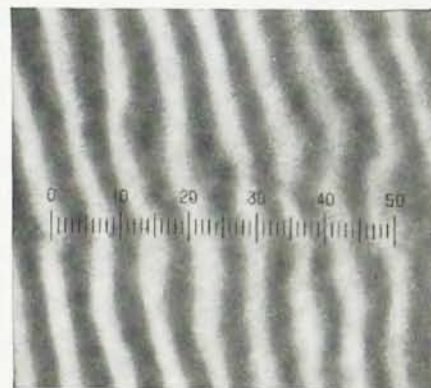
If we were to give you an unsupported statement of the absolute flatness of the detectors, a quizzically arched eyebrow would be a justified response. Consider the photograph herewith.



The picture shows the interference pattern between a typical 17mm wafer and an optical flat. Since we used He light, a deviation of one full light band would correspond to 0.3 μ . As you can see, the deviation is less than one band over the entire central 70% of the wafer. (The outer 30% need not worry you because it's under the mounting ring.)

An unruffled exterior

The closer you look at the detectors, the better they look. The wavy lines in the picture below indicate how astonishingly smooth the surface is. The measurement was made with a microscopic double-beam interference technique, using Cd light. Again, 0.3 μ per band is a good approximation. The average peak deviation shown is about 0.1 μ .



Thickness variations depend on detector size and thickness, with most devices being in the less than 1 μ category. Rather than belabor the point, let's put it this way: if you can't perform your experiment because of a lack of thickness uniformity, send the detector back and we'll replace it or refund your money, as you wish. (But please don't overlook the Landau effect, scattering, channeling, and end-of-range straggling; even an absolutely perfect ΔE detector couldn't obviate these problems.)

Re: electrodes

Their thickness is important, of course. We control it to a few percent variation from batch to batch. We give you a careful measurement of both electrodes, along with a precise measurement of the Si wafer thickness. Alpha particle resolution, please note, is measured with the alphas incident through the back (low field strength) contact.

Have we got your size?

The new off-axis ΔE 's are available with active areas from 25 to 200mm². Prices, as you might expect, are higher than those you may have paid for devices with poorer specifications. The best way to find out how bad the bite will be is to ask us for a quote. But you'll also want complete specifications. Our thin detector data sheet will give them to you. Or, you can call our Technical Information Center (615-482-1006) to talk over your requirements. The man you speak with will be a detector specialist—possibly, one of the developers of our new ΔE 's. You'll pardon his enthusiasm, of course. Ortec Incorporated, 101 Midland Road, Oak Ridge, Tenn. 37830.

ORTEC®

SEPTEMBER 1967

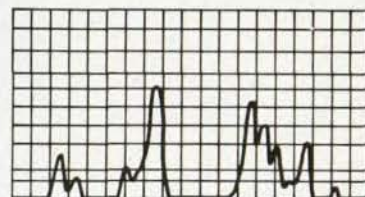
- 18-20 **Electrical Insulation and Dielectric Phenomena** □ NATIONAL ACADEMY OF SCIENCES—NATIONAL RESEARCH COUNCIL □ Pocono Manor, Pa. (Col. R. A. Cliffe) 7/67
- 18-22 **Localized Excitations in Solids** □ IUPAP □ Irvine, Calif. (A. A. Maradudin) 2/67
- 18-23 **Stochastic Problems in Underwater Sound Propagation** □ ITALIAN NAVY □ La Spezia, Italy (M. Federici) 6/67
- 18-29 **Inorganic Materials** □ PENN STATE U. □ University Park, Pa. (Conference Center, Penn State U.) 6/67
- 19-21 **Electron Optics, Instrumentation and Electron Microscopy** □ IPFS □ St Andrews, Scotland (Meetings Officer, IPFS) [7/14] 8/67
- 19-22 **Pulsed High Density Plasmas** □ APS □ Los Alamos, N. M. (F. L. Ribe) 7/67
- 20-22 **Stress Analysis in Bioengineering** □ IPFS □ Leatherhead, England (F. D. A. Boylett) [6/11] 6/67
- 20-27 • **Elementary Particles, Heidelberg, F.R. Germany** (E. W. D. Steel, Scientific Conference Secretariat, CERN) (by invitation) 9/67
- 21, 22 **Electrodeless Breakdown of Gases** □ IPFS □ Leatherhead, England (Meetings Officer, IPFS) 5/67
- 24-28 **Power Generation** □ IEEE-AMERICAN SOCIETY OF MECHANICAL ENGINEERS □ Detroit (R. W. Hartwell) 7/67
- 25-28 • **Solid-State Physics Research with Accelerators** □ BROOKHAVEN NATIONAL LAB. □ Upton, N. Y. (A. N. Goland, Physics Dept., Brookhaven National Lab., Upton, N. Y. 11973) 9/67
- 26-28 **Reactor Shielding Design** □ BRITISH NUCLEAR ENERGY SOCIETY □ Harwell, England (P. B. E. Thompson) 4/67
- 26-28 **Magnetic Materials and Their Applications** □ IPFS □ London (Meetings Officer, IPFS) 12/66
- 27-29 **Low-Energy Nuclear Physics** □ IPFS □ Manchester, England (Meetings Officer, IPFS) 8/67
- 28-3 **Amorphous and Liquid Semiconductors** □ INSTITUTE OF PHYSICS OF THE ACADEMY OF THE SOCIALIST REPUBLIC OF ROMANIA □ Bucharest, Romania (R. Grigorevici) [6/30] 8/67

OCTOBER 1967

- 1-15 • **Elementary Particles, Herceg Novi, Yugoslavia** (P. Cier, Nuclear Research Center, Rue Loess, 67, Strasbourg-Cronenbourg, France) 9/67

- 2-7 □ GERMAN PHYSICAL SOCIETY □ Berlin (E. Boersch) 4/67
- 3 (through 16 Dec.) **Condensed Matter** □ INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS □ Trieste, Italy (ICTP) [7/31] 7/67
- 3-5 **Radiation Effects in Semiconductors** □ SANDIA LABORATORIES □ Sante Fe, N. M. (F. L. Vook) [6/1] 6/67
- 4-6 **Circuit and Systems Theory** □ IEEE □ Monticello, Ill. (J. B. Cruz Jr) [8/1] 7/67
- 4-6 **Ultrasonics** □ IEEE □ Vancouver, B. C. (B. A. Auld) [8/1] 6/67
- 6-7 • **Elementary Particles** □ APS □ Stony Brook, N. Y. (O. Ames, Physics Dept., SUNY at Stony Brook, L. I., N. Y. 11790) 9/67
- 9 **Excited Materials** □ U. OF NORTH CAROLINA □ Chapel Hill, N. C. (S. I. Choi) 7/67
- 11-13 □ OSA □ Detroit (M. E. Warga) 12/66
- 12, 13 **Physics of Selenium and Tellurium** □ SELENIUM AND TELLURIUM DEVELOPMENT ASSOCIATION □ Montreal (H. I. Fufeld) 6/67
- 15-20 • **Semiconductors** □ ELECTRO-CHEMICAL SOCIETY □ Chicago (M. E. Jones, Texas Instruments Inc., PO Box 5936, MS 145, Dallas, Tex. 75222) [9/8] 9/67
- This session will include discussions on crystal growth, epitaxy, polycrystalline materials properties, diffusion, heterojunction formation and properties, new materials, ion-implantation techniques, electron-beam processing, diffusion and alloying, contact preparation and properties, surface and oxides, photomasking techniques, isolation techniques.
- 16-19 **Materials Research** □ NBS □ Gaithersburg, Md. (R. S. Carter) [6/15] 6/67
- 16-20 **Fiber and Polymer Microscopy** □ MCCRONE RESEARCH INSTITUTE □ Chicago (M. L. Fallert) 7/67
- 17-20 • **Nuclear Physics, Nuclear Chemistry and Elementary Particles, Warsaw, Poland** (L. Leszczynski, State Council for Atomic Energy, Palace of Sciences and Culture, Warsaw, Poland) 9/67
- 18-20 **Exploding Wires** □ AIR FORCE CAMBRIDGE RESEARCH LABORATORIES □ Boston (W. G. Chace) 6/67
- 18-20 **Gaseous Electronics** □ APS □ San Francisco (R. N. Varney) [9/1] 2/67
- 18-20 **Electron Devices** □ IEEE □ Washington, D. C. (B. J. McMurtry) [8/1] 7/67
- 20, 21 ♦ □ AAPT-APS NEW ENGLAND SECTIONS □ Lewiston, Maine For APS: (R. F. Kingsbury) [9/22] 7/67 For AAPT: (W. H. Ross, Hasbrouck Physics Laboratory, U. of Massachusetts, Amherst, Mass. 01002) 9/67

Varian Vacuum PPG



Measures Partial Pressures and Total Pressure

- Mass ranges: 1 to 70 AMU
- Minimum detectable partial pressure: 2×10^{-11} Torr
- Minimum detectable total pressure: 5×10^{-11} Torr
- Low cost, easy to use
- Automatic or manual mass scan

Write for complete information. Varian Vacuum Division, Palo Alto, California; Zug, Switzerland; Georgetown, Ontario.



varian
vacuum division

Just arrived! Meet the new CARY 401



THE ALL SOLID STATE VIBRATING REED ELECTROMETER... WITH THE "EXTRAS" BUILT IN

It's compact and improved. So compact you can carry it in an overnight bag. But when it comes to capability, the CARY 401's a giant.

For example, there are a dozen different built-ins. All formerly optional. On the CARY 401 they're standard. Including multiple input resistor switching, remote input shorting, critical damping, grounded voltage modification, and master-slave operation.

What's more, we've added some brand new features. Like a battery power mode that provides portability and takes over if line power fails. Even removable rack mounting brackets.

Sensitivity? Excellent. The CARY 401 detects currents less than 10^{-17} ampere, charges as small as 5×10^{-16} coulomb, potentials down to 2×10^{-5} volt and resistances as high as 10^{16} ohms.

There's extra reliability too. That's because the CARY 401 is solid state. All of it. Including the input stage. That means high operational reliability, longer instrument life and no microphonic problems.

This remarkably versatile electrometer permits you to do almost any job you wish. Want more details? Call CARY for a demonstration of what's in the suitcase, or write for Data File P611-97.

CARY

instruments • a varian subsidiary

2724 South Peck Road, Monrovia, Calif. 91016

UV/VIS/IR/Raman Recording Spectrophotometers
Manual Spectrophotometers • Spectropolarimeters
Vibrating Reed Electrometers & Amplifiers

OCTOBER 1967

- 23-25 ☐ APS NUCLEAR PHYSICS DIVISION
☐ Madison, Wis. (J. A. Harvey)
[9/22] 4/67

- 23-25 • ☐ s of R ☐ Washington, D. C.
(A. B. Bestul, National Bureau of
Standards, Washington, D. C.
20234) 9/67

- 26-28 • X-Ray Techniques in Materials
Science ☐ IPPS ☐ London
(Meetings Officer, IPPS, 47 Bel-
grave Sq., London, SW 1) [7/31]
9/67

This conference will discuss new advances in x-ray techniques for understanding the correlation of physical properties with the structure of materials. Topics include: monochromatization, microfocus techniques, image intensification, high-precision analysis, epitaxy, measurement under extreme conditions such as temperature or pressure.

- 31-2 Nuclear Science ☐ IEEE ☐ Los
Angeles (R. C. Maninger) [6/15]
7/67

NOVEMBER 1967

- 1-3 Plasmas in Open-Ended Geom-
etry ☐ ORNL ☐ Gatlinburg, Tenn.
(Conference Chairman, ORNL)
6/67

- 1-3 Diffraction ☐ MELLON INSTITUTE
☐ Pittsburgh (S. Diamond)
[9/11] 6/67

- 1-3 Circuits and Systems ☐ IEEE ☐
Pacific Grove, Calif. (S. R.
Parker) [9/1] 7/67

- 3, 4 ☐ AAPT TEXAS SECTION ☐ Sher-
man, Tex. (V. E. Bottom) 7/67

- 4 • Midwest Solid State Conference
☐ U. OF MISSOURI ☐ Columbia,
Mo. (E. B. Hensley, Physics
Dept., U. of Missouri, Columbia,
Mo. 65201) 9/67

- 6, 7 Photopolymers ☐ SOCIETY OF
PLASTIC ENGINEERS ☐ Ellenville,
N. Y. (J. M. Schiller) 6/67

- 6-8 Applied Superconductivity ☐
AEC ☐ Austin, Tex. (W. H.
Hartwig) [8/7] 6/67

- 6-8 Reliability Physics ☐ IEEE ☐
Los Angeles (G. T. Jacobi)
[6/15] 7/67

- 8-10 • Characterization of Materials ☐
U. OF ROCHESTER ☐ Rochester,
N. Y. (G. J. Su, Chem. Engineer-
ing Dept., U. of Rochester,
Rochester, N. Y. 14627) 9/67

- 8-11 Plasma Physics ☐ APS ☐ Austin,
Tex. (W. E. Drummond) [9/30]
8/67

- 14-16 Computers ☐ AMERICAN FEDER-
ATION OF INFORMATION PROCESS-
ING SOCIETIES ☐ Anaheim, Calif.
(H. T. Larson) [4/14] 7/67

- 14-17 ☐ ASA ☐ Miami, Fla. (J. C.
Steinberg) 12/66

- 16-18 ☐ APS ☐ New York City (W. W.
Havens Jr) 12/66

- 18 ☐ AAPT IOWA SECTION ☐ Iowa
City (G. W. Bowen) 7/67

- 18 • ☐ AAPT NORTHERN CALIFORNIA
SECTION ☐ Arcata, Calif. (L. M.
Clendenning, Humboldt State
College, Arcata, Calif.) 9/67

Guest lecturer will be Robert Hofstadter.

- 20-22 Fluid Dynamics ☐ APS ☐ Beth-
lehem, Pa. (P. S. Klebanoff)
[10/5] 7/67

DECEMBER 1967

- 1, 2 ☐ AMERICAN ASSOCIATION OF
PHYSICISTS IN MEDICINE ☐ Chi-
cago (J. R. Cameron) [10/1]
6/67

- 1, 2 • π N Scattering ☐ U. OF CALIF. ☐
Irvine, Calif. (G. L. Shaw, U. of
Calif., Irvine, Calif.) 7/67

- 4 (through 20 Jan.) Quantum
Chemistry, Solid-State Physics
and Quantum Biology ☐ U. OF
FLORIDA-U. OF UPPSALA ☐
Gainesville, Fla. (Winter Insti-
tute, U. of Florida) [10/1] 8/67

- 5-7 ☐ AAS ☐ Philadelphia (G. C.
McVittie) 2/67

- 18-20 • ☐ APS ☐ Pasadena, Calif. (W.
Whaling, California Institute of
Technology, 1201 E. California
St., Pasadena, Calif. 91109) 9/67

- 26-30 • ☐ AAAS ☐ New York (R. L.
Taylor, AAAS 1515 Massachu-
setts Ave. N.W., Washington,
D. C. 20005) 9/67

JANUARY 1968

- 3-6 Solid-State Physics ☐ IPPS ☐
Manchester, England (Meetings
Officer, IPPS) [10/27] 8/67

- 24, 25 Health Physics ☐ HEALTH PHYS-
ICS SOCIETY ☐ Augusta, Ga. (J.
H. Horton) [10/16] 8/67

- 29-1 ☐ APS ☐ Chicago (R. G. Sachs)
12/66

- 29-1 ☐ AAPT ☐ Chicago (S. S. Bal-
lard) 2/67

FEBRUARY 1968

- 1-3 • Solar Astronomy ☐ AAS ☐ Tuc-
son, Arizona (N. Sheeley, Kitt
Peak National Observatory, 950
North Cherry Ave., PO Box 4130,
Tucson, Ariz. 85717) [12/7]
9/67

Topics include: energetic solar particles, in-
struments and techniques, surface dynamics and
solar magnetism, and radiative transfer.

- 4-7 ☐ ACA ☐ Tucson, Ariz. (D. H.
Templeton, Chemistry Dept., U.
of California, Berkeley 94720)
9/67

- 5-7 ☐ s of R ☐ San Diego, Calif. (J.
F. Johnson, Richmond Labora-
tory, California Research Corp.,
Richmond, Calif. 94081) 9/67

- 26-28 • ☐ APS ☐ Boston (W. W. Havens
Jr, 335 E. 45 St., New York,
N. Y. 10017) 9/67

- 28-1 Scintillation and Semiconductor
Counters ☐ AEC-IEEE ☐ Wash-
ington, D. C. (G. A. Morton)
[11/7] 8/67

Now...
Available
from Stock

YIG and GaYIG SINGLE CRYSTALS

with exceptionally narrow line-
widths and a minimum of
spurious responses.

ULTRA HIGH PURITY CHEMICALS, INCLUDING NEW RHENIUM TRIOXIDE

with a purity of 6 nines or
better in many substances.

II-VI COMPOUNDS

Cadmium Sulfide, Selenide, Tel-
luride. Zinc Sulfide, Selenide,
Telluride. Many others. Custom
Compounds of II-VIs.

METAL SINGLE CRYSTALS

of extremely high purity, in
many as grown shapes and
sizes. Can be grown, cut,
oriented and polished to speci-
fication.

Call or write for literature.



semi-elements, inc.

Saxonburg Boulevard
Saxonburg, Pa. 16056
Phone: 412-352-1548

A Subsidiary of Riker Video Industries, Inc.

ALLEN, RICHARD A.
AIR RADIATION TABLES:
SPECTRAL DISTRIBUTION
FUNCTIONS FOR MOLEC-
ULAR BAND SYSTEMS.
June, 1966. Contracts
NASw-748 and DA-01-021-
AMC-12005 (Z).

JONES, ROBERT T.
MOTIONS OF A LIQUID
IN A PULSATING BULB
WITH APPLICATION TO
PROBLEMS OF BLOOD
FLOW. December, 1965.
Contract Nonr-4881 (00).

**MATTSSON, ARNE C.J.,
DUCHARME, EDWARD L.,
GOVONI, EDWARD M.,
MORROW, IRVING B. JR.,
AND BROGAN, THOMAS R.**
PERFORMANCE OF A
SELF-EXCITED MHD
GENERATOR. October,
1965. Contract AF
33(615)-1862.
Presented at the Inter-
national Conference on
Energetics, Rochester,
New York, August 18-20,
1965.

**YOUNG, LEE A., AND
EACHUS, W. JAMES**
DIPOLE MOMENT FUNC-
TION AND VIBRATION-
ROTATION MATRIX
ELEMENTS FOR CO.
January, 1966. Contract
DA-01-021-AMC-12005 (Z).
Published in J. Chem.
Phys. July (1966).

**BUNEMAN, O., LEVY, R.H.,
AND LINSON, L.**
THE STABILITY OF
CROSSED-FIELD ELEC-
TRON BEAMS. March,
1966. Contracts NASw-
1101 and AF 49(638)-
1553.
Published in J. Appl.
Phys. (July 1966).

**SCHNEIDERMAN, A.M.
AND PATRICK, R.M.**
OPTIMIZATION OF THE
THERMAL EFFICIENCY
OF THE MAGNETIC
ANNULAR ARC. March,
1966. Contract NAS
3-5748.
Published in AIAA J. Vol.
4, No. 10 1836-1838
(October 1966).

KENNEL, C.
LOW FREQUENCY
WHISTLER MODE.
January, 1966. Contract
Nonr-2524(00).

**BRAU, C.A., KECK, J.C.,
AND CARRIER, G.F.**
TRANSIENT PHENOMENA
IN DISSOCIATIVE
REACTIONS. Avco Everett
Research Laboratory
Research Report 243,
March 1966. Contracts
AF 04(694)-690 and
DA-01-021-AMC-12005
(Z).
Published in Phys. of Fluid
9:10:1885-1895 (October
1966).

**LEVY, R.H., AND
CALLEN, J.D.**
THE DIOCOTRON INSTA-
BILITY IN A QUASI-
TOROIDAL GEOMETRY.

September, 1965. Contract
NASw-1101.
Published in Phys. Fluids
8:2298 (December 1965).

JOHANSSON, ROLF.
CURRENT SHEET TILT IN
A RADIAL MAGNETIC
SHOCK TUBE. September,
1964. Contract AF
49(638)-659. N65-12160.
AD 608147.
Published in Phys. of
Fluids 8:866-871
(May, 1965).

ALLEN, R.A.,
AIR RADIATION GRAPHS:
SPECTRALLY INTEGRATED
FLUXES INCLUDING LINE
CONTRIBUTIONS AND
SELF ABSORPTION.
September, 1965. Con-
tracts NASw-748 and DA-
01-021-AMC-12005 (Z).

**PATRICK, R.M. AND
SCHNEIDERMAN, A.M.**
AXIAL CURRENT DIS-
TRIBUTION IN THE
EXHAUST OF THE
MAGNETIC ANNULAR
ARC. July, 1966. Contract
NAS 3-5748.

**LEONARD, D.A., AND
GERRY, E.T.**
PULSED NITROGEN
SECOND POSITIVE LASER.
December, 1965. Contract
AF 04(694)-414. AFBSD-
TR-65-461.
Published in Appl. Phys.
Letters, 7:4 (1965)
7:6 (1965)

MC CUNE, JAMES E.
LINEAR THEORY OF AN
MHD OSCILLATOR.
December, 1964. N65-
15729. AD609165.

**PATRICK, R.M., AND
PUGH, E.R.**
LABORATORY SIMULA-
TION OF SOLAR WIND
PHENOMENA. October,
1965. Contracts AF
49(638)-1483 and NASw-
837.
Presented at 6th Biennial
Gas Dynamics Symposium,
Evanston, Illinois, August
25-27, 1965. AIAA Paper
No. 65-625.

**JANES, G.S., LEVY, R.H.,
BETHE, H.A., AND
FELD, B.T.**
ON A NEW TYPE OF
ACCELERATOR FOR
HEAVY IONS. December,
1965. Contract AF
49(638)-1553.
Published in Phys. Rev.
145:925 (May 1966).

LEONARD, D.A.
PULSED NEON 5401 A
LASER. July, 1966.
Contract N62269-3505.

**PETSCHKE, H.E. AND
THORNE, RICHARD M.**
THE EXISTENCE OF
INTERMEDIATE WAVES
IN NEUTRAL SHEETS.
July, 1966. Contract NAS
w-1400.
Accepted for publication
in Astrophysical J. March,
1967.

SUTTON, GEORGE W.

FLUCTUATION INTENSITY
OF PASSIVE SPECIES IN
TURBULENT SHEAR
FLOWS. December 1966.
Contracts Nos. AF
04(694)-983 and DA-01-
021-AMC-12005(Z).

**CAMM, J.C., TAYLOR, R.L.,
AND LYNCH, R.**
SYNCHRONIZED HIGH-
SPEED SCANNING
INFRARED SPECTROM-
ETER. August, 1966.
Contracts AF 29(601)-
7055 and DA-01-021-AMC-
12005 (Z).
Accepted for publication
in J. Appl. Optics.

**WEISS, R.F., GREENBERG,
R.A., AND BIONDO, P.P.**
A NEW THEORETICAL
SOLUTION OF THE
LAMINAR, HYPERSONIC
NEAR WAKE. Part 1 —
Formulation and Method
of Solution. August, 1966.
Contracts AF 04(694)-690
and DA-01-021-AMC-12005
(Z).

LOUIS, J.F.
SHOCK TUBE STUDY OF
THE IONIZATION OF
CESIUM. September,
1966. Contracts AF
04(694)-690 and DA-01-
021-AMC-12005 (Z).

**KENNEL, C.F. AND
PETSCHKE, H.E.**
VAN ALLEN BELT PLASMA
PHYSICS. December,
1966. Contracts AF
49(638)-1483 and NAS
w-1400.

KIVEL, BENNETT
BREMSSTRAHLUNG IN
AIR. June, 1966. Contract
AF 29(601)-7055.
Accepted for publication
in J. Q. S. R. T.

**KENNEL, C.F. AND
THORNE, R.M.**
UNSTABLE GROWTH OF
UNDUCTED WHISTLERS
PROPAGATING AT AN
ANGLE TO THE GEO-
MAGNETIC FIELD. May,
1966. Contracts Nonr-
2524(00) and NASw-837.
Accepted for publication
in Journal of Geophysical
Research, 1967.

KIVEL, BENNETT
EXCITED STATES OF
NEGATIVE IONS OF
ATOMIC OXYGEN. May,
1966. Contract AF
04(694)-690.
Published in Physical
Review 152:211 (1966).

KIVEL, BENNETT
NEUTRAL ATOM
BREMSSTRAHLUNG. June,
1966. Contract AF
29(601)-7055.
Accepted for publication
in J. Q. S. R. T.

**DAUGHERTY, J.D. AND
LEVY, R.H.**
ON THE EQUILIBRIUM OF
ELECTRON CLOUDS IN
TOROIDAL MAGNETIC
FIELDS. May, 1966.
Contracts NAS 8-20310
and AF 49(638)-1553.
Accepted for publication
Phys. Fluids (Jan. or
Feb. 1967).

The Avco Everett Research Laboratory
is interested in hearing from advanced
Research Scientists who would
appreciate the opportunity of making
contributions such as the above
to their fields.

Write Mr. Louis Rudzinsky



2385 REVERE BEACH PARKWAY
EVERETT, MASSACHUSETTS 02149
An Equal Opportunity Employer

MARCH 1968

- 4-7 Neutron Cross Section and Technology ☐ APS-AEC-NBS ☐ Washington, D. C. (D. T. Goldman) [12/1] 8/67
- 12-15 • ☐ OSA ☐ Washington, D. C. (M. E. Warga, 1155 16th St. NW, Washington, D.C.) 9/67
- 18-21 • ☐ APS ☐ Berkeley, Calif. (W. Whaling, California Institute of Technology, 1201 E. California St., Pasadena, Calif. 91109) 9/67

APRIL 1968

- 1-3 • Heavy Particle Collisions ☐ IPPS ☐ Belfast, Ireland (Meetings Officer, IPPS, 47 Belgrave Square, London, SW 1) [9/29] 9/67
Sessions will cover: theoretical and experimental survey of fast and slow heavy-particle collisions, classical and semiempirical theories, experimental techniques.
- 2-3 • Semimetals and Narrow Gap Semiconductors ☐ IPPS ☐ Durham, England (Meetings Officer, IPPS, 47 Belgrave Sq., London SW 1) [1/5] 9/67
Topics: experimental and theoretical aspects of these materials; transport, optical and ultrasonic properties, band structures and Fermi surfaces, crystal growth and perfection, applications.
- 2-4 • ☐ AAS ☐ Charlottesville, Va. (P. M. Routley, Princeton University Observatory, Princeton, N. J.) 9/67

- 3-5 • Magnetism ☐ IEEE ☐ Washington, D. C. (J. M. Lommel, General Electric R&D Center, PO Box 8, Schenectady, New York 12301) [12/15] 9/67

Topics in this sixth international conference include: computer magnetism, magnetic recording, magneto-optics, microwave magnetism, magnetoelastic devices, magnetic-materials properties, superconducting devices.

- 22-25 ☐ APS ☐ Washington, D. C. (W. W. Havens Jr, 335 E. 45 St., New York, N. Y. 10017) 9/67

AUGUST 1968

- 7-9 ♦ Ellipsometry ☐ U. OF NEBRASKA ☐ Lincoln, Neb. (N. M. Bashara, Electrical Materials Laboratory, U. of Nebraska, Lincoln, Neb. 68508) 9/67

SEPTEMBER 1968

- 16-21 ♦ ☐ 15TH AMPERE COLLOQUIUM ☐ St Martin d'Hères, France (P. Averbuch, Laboratoire de Spectrométrie Physique, Faculté des Sciences de Grenoble, Domaine Universitaire, St Martin d'Hères 38, France) 9/67

DECEMBER 1968

- 16-20 • Relativistic Astrophysics ☐ SOUTHWEST CENTER FOR ADVANCED STUDIES ☐ Dallas (I. Robinson, Southwest Center for Advanced Studies, PO Box 30365, Dallas, Tex. 75230) 9/67 ☐

TECHNICAL DIRECTOR

NAVAL WEAPONS CENTER CHINA LAKE, CALIFORNIA

\$25,980 per annum

The Center's mission is to "conduct research, design, development, tests, and technical evaluation of complete weapons systems, their components and assemblies."

The mission is accomplished by a technical staff of some 1,500 civilian scientists and engineers plus nearly 3,000 support employees in a team effort with approximately 800 Naval personnel. Principal laboratories are at China Lake and Corona, California.

The Technical Director of this Center, the largest research and development complex in the Navy Department, is responsible for conducting a comprehensive coordinated R & D program. The uncommon diversification of technical programs associated with this Center offer a challenge of highest order—applicants must have demonstrated superior ability in planning, organizing, directing and coordinating research and development programs of major importance.

Immediate contact will be made with qualified applicants, with selection to be made by Nov. 15, 1967. Please forward resume of educational and professional experience, prior to Oct. 1st, to:

**Professional Staffing Coordinator (Code 652)
Naval Weapons Center
China Lake, California 93555**

U.S. Citizenship Required
An Equal Opportunity Employer

A Corcoran Brief:

How to select a personnel consultant

Select one who recognizes that the ultimate decision is yours. And one who—knowledgeably, personally, and with intellectual integrity—focuses your attention on situations compatible with your professional and personal objectives.

Select one who can see beyond the obvious and can perhaps suggest objectives you've not considered.

Last, select one, only one.

Here at Corcoran, we serve the BS, MS and PhD degree-holders individually. Nationwide, we work with large and small industrial and research clients on a fee-paid basis. Your call or correspondence is invited.

JOSEPH P. CORCORAN
Personnel Consultants

505E Germantown Pike
Lafayette Hill, Pa. 19444
(215) 825-0848

Electronics for Light Measurement

PHOTOMETERS

A complete line of photometers for such applications as:

- integration and digitizing by means of current to frequency conversion
- demodulation of chopped light signals
- accurate and stable current measurement for recorder drive

COOLABLE PMT HOUSINGS



New, inexpensive (from \$245) COOLABLE photomultiplier housing to operate S-1 cathodes, such as 7102, at dry ice temperature, with quartz window, top loading, fog-free operation and 12 hour run on one load of dry ice.

Also—

STANDARD HOUSINGS for all leading photomultipliers, **SPECIAL HOUSINGS** for larger tubes and **VOLTAGE DIVIDER NETWORKS**.

PACIFIC PHOTOMETRIC INSTRUMENTS

3024 Ashby Ave. Berkeley, Calif.
(415) 848-1141