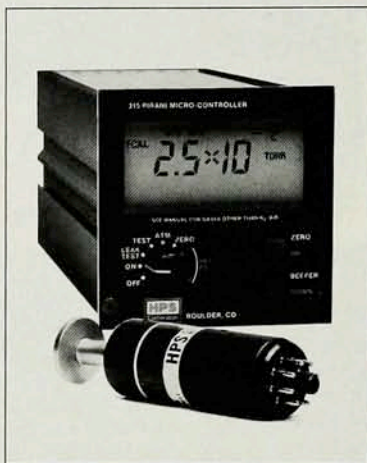


New Pirani Gauge System for Vacuum Measurement to 10^{-3} Torr

- ▶ range to 10^{-3} Torr (1.33×10^{-1} Pa)
- ▶ leak test function
- ▶ microprocessor based
- ▶ pressure readout user selectable in Torr, Pascal, or mbar
- ▶ sensor tube useable in any position
- ▶ temperature compensated sensor tube
- ▶ three set points standard
- ▶ calibrated for air/nitrogen
- ▶ operates on all standard line voltages and frequencies
- ▶ mounts in panel cut-out, or use free standing



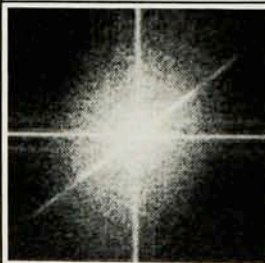
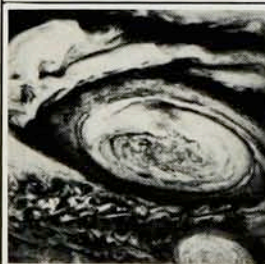
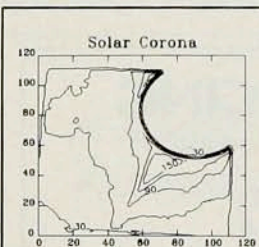
for detailed series 315 data sheet contact

AVS Show-Booths #216-218



HPS Corporation
5330 Sterling Drive
Boulder, CO 80301
phone (303) 449-9861
TWX 910-940-3243

Circle number 105 on Reader Service Card



Scientific Data Reduction & Analysis.
Publication Quality Graphics.
Image Processing.

IDL software integrates it all

- Compatible with VAX/VMS™ computer systems, most graphic terminals and image display systems
- Lets you see your data at every step
- Allows immediate interactive compilation and execution
- Vector and array operators for powerful interactive capabilities

Quickly transform your raw data into results using IDL's advanced features, including: Statistical Analysis, Interpolation, Smoothing, Curve Fitting, Data Editing, Modeling, Interactive Graphics, Image Processing Display and Analysis.

To receive our informative IDL brochure call or write:

RSI

RESEARCH SYSTEMS, INC.
2021 Albion St. Denver CO 80207 (303) 399-1326

Voyager image courtesy of NASA and JPL.
VAX/VMS are trademarks of
Digital Equipment Corp.

Circle number 106 on Reader Service Card

letters

served by Robert E. Schlier and Harrison E. Farnsworth.¹ Subsequently Lander reproduced their results in the new display-type LEED apparatus that had been developed by Lester Germer in 1960. Germer used a flat fluorescent screen—Lander's improvement was to use a curved screen. (He also introduced improved kinematical LEED analysis.) Details of the early LEED work of Farnsworth's laboratory, including the first observations of enlarged unit cells on Ge, InSb and GaSb as well as Si, appear in his Welch Memorial Lecture.² The lab's success was based on the development of ion bombardment and annealing as a method of producing atomically clean surfaces on semiconductors. The first LEED measurements on semiconductor surfaces produced by cleavage in vacuum were also carried out in this laboratory.³

References

1. R. E. Schlier, H. E. Farnsworth, J. Chem. Phys. **30**, 917 (1959).
2. H. E. Farnsworth, J. Vac. Sci. Technol. **20**, 271 (1982).
3. D. Haneman, Phys. Rev. **119**, 563, 567 (1960).

D. HANEMAN

University of New South Wales
Kensington, New South Wales,
Australia

11/86

Needed: Ice advice

I am an Optical Society of America member who will be representing Puerto Rico in the sport of luge (the luge is a small sled raced on an ice track) at the XVth Winter Olympic Games, to be held in Calgary, Canada, in February 1988. I am seeking advice and suggestions from the physics community for improving the performance of my sled. I would particularly appreciate hearing from those with expertise in ice friction and aerodynamics. Those interested may contact me at Rd. 1, Box 399A, Nassau NY 12123.

GEORGE F. TUCKER

8/87

Nassau, New York

Moe Berg in the movies

With my partner, Jerry Feldman, I have received a grant from the American Film Institute to continue work and research on our film about the life and times of Morris (Moe) Berg. Berg was a man who lived between two worlds. For 18 seasons he played major league baseball and was the celebrity

HIGH TEMPERATURE SUPERCONDUCTORS

Edited by V.K. Wadhawan and L.C. Gupta

This special issue of Phase Transitions (Volume 10, Nos. 1 & 2) contains the latest research results from Indian scientists on high-temperature superconductors. The issue will be of value and interest to all those involved in superconductor research.

CONTENTS: High Temperature Superconductivity in the Y-Ba-Cu-O System, K. Sreedhar, R.A. Mohan Ram, A.K. Raychaudhuri, P. Ganguly and C.N.R. Rao . Superconductivity of Y-Ba-Cu-O and Substituted Systems, S.K. Agarwal, B. Jayaram, A. Gupta and A.V. Narlikar . Study of Inverse a.c. Josephson Effect in Y-Ba-Cu-O and Y-Ba-Sr-Cu-O, A.K. Gupta, B. Jayaram, S.K. Agarwal, A. Gupta, and A.V. Narlikar . Photoemission Studies of the High T_c Superconductor, $YBa_2Cu_3O_7$, D.D. Sarma, K. Sreedhar, P. Ganguly and C.N.R. Rao . Superconductivity Characteristics of the System $Y_{1.2}Ba_{0.8}CuO_4$, J.V. Yakhmi, R.M. Iyer, A.M. Umarji, A.K. Rajarajan, L.C. Gupta and R. Vijayaraghavan . Possible Superconductivity at 140K, R. Vijayaraghavan, L.C. Gupta, J.V. Yakhmi and R.M. Iyer . High T_c Superconductors with Different Cu^{2+}/Cu^{3+} Ratios in the Y-Ba-Cu-O System, S. Sinha, I.S. Mulla and A.P.B. Sinha . Infrared Spectra of Superconducting $La_{2-x}Sr_xCuO_4$ and $YBa_2Cu_3O_{7-\delta}$, P. Ganguly, J.R. Fernandes and C.N.R. Rao . Approaches to the Synthesis of High- T_c Superconducting Oxides in La-Ba-Cu-O and Y-Ba-Cu-O Systems, V. Bhat, A.K. Ganguli, K.S. Nanjundaswamy, R.A. Mohan Ram, J. Gopalakrishnan and C.N.R. Rao . Conductivity anomalies in Y-Ba-Cu-O at 40K and 100K under High Quasihydrostatic Pressures, V. Sankara Sastry, S. Kalavathy, B.K. Guha, R. Baskaran, U. De, J. Janaki, T.S. Radhakrishnan, K.A. Thomas and G.V. Subba Rao . Superconductivity in the $(La, Ln)_{2-x}(Ba, Sr)_xCuO_4$ System, R. A. Mohan Ram, P. Ganguly and C.N.R. Rao . Effect of Annealing Conditions on High Temperature Superconductivity in $La_{2-x}Sr_xCuO_4$, Ashok Kumar Rastogi, Alok Banerjee, Manju Tewari and Dharendra Bahadur.

August 1987, 130 pp.
hardcover 0-677-21970-9
\$81.00 List Price
\$49.00 Individual Price*

ORDER YOUR COPY TODAY

*Orders from individuals must be prepaid. Prices include postage and handling. Prices are applicable in North America and Western Europe only and are subject to change without notice.

Gordon and Breach Science Publishers, Inc.
P.O. Box 786, Cooper Station, New York, NY 10276, USA or
P.O. Box 197, London WC2E 9PX, UK

Circle number 107 on Reader Service Card

Experience history...Einstein's genius...Poincaré's creativity...the physics community's perseverance during the Great Depression...the drama of Goudsmit and Uhlenbeck's discovery...

HISTORY OF PHYSICS

Edited by Spencer Weart and Melba Phillips

With an array of accomplished contributors including seven Nobel Prize winners, this collection of reprinted *Physics Today* articles deepens your appreciation of modern day physics.

Bringing to life the exciting achievements of recent generations, this fully illustrated volume provides insights into the scientific process, as well as the people and events behind the dramatic progress and inspiring discoveries.

With over 300 photographs and illustrations, HISTORY OF PHYSICS is a valuable library reference, a useful supplementary text for a wide range of courses, and stimulating leisure reading for both physicists and informed general readers.

giant cancer tube and the Kellogg Radiation Laboratory, Charles H. Holbrow • Fifty years of physics education, A. P. French • Alfred Lee Loomis—last great amateur of science, Luis W. Alvarez • Pyotr Kapitza, octogenarian dissident, Grace Marmor Spruch • How I created the theory of relativity, Albert Einstein • The discovery of fission, Otto R. Frisch and John A. Wheeler • J. J. Thomson and the discovery of the electron, George P. Thomson • The idea of the neutrino, Laurie M. Brown

1985 • 375 pp • ISBN 0-88318-468-0 • LC 85-70236
• Softcover: \$25.00 (20% discount available to members of AIP Member and Affiliated Societies)

Outstanding Articles from HISTORY OF PHYSICS:

Franklin's physics, John L. Hellbron • Poincaré and cosmic evolution, Stephen G. Brush • The roots of solid-state research at Bell Labs, Lillian Hartmann Hoddeson • The

Send orders to: **American Institute of Physics**
Marketing Services
335 East 45th Street
New York, NY 10017

To place credit card orders, call 1-800-AIP-PHYS; in New York State, call 212-661-9404.

ANDREW GEMANT AWARD

Call for Nominations

The Andrew Gemant Award of the American Institute of Physics recognizes the accomplishments of a person who has made significant contributions to the understanding of the relationship of physics to its surrounding culture and to the communication of that understanding. The Selection Committee invites nominees for the 1988 award.

Criteria

The awardee is chosen based on contributions in one or more of the following areas:

- Creative work in the arts and humanities that derives from a deep knowledge of and love for physics.
- The interpretation of physics to the public through such means as mass media presentations or public lectures.
- The enlightenment of physicists and the public regarding the history of physics or other cultural aspects of physics.
- The clear communication of physics to students who are learning physics as part of their general education.

Nature of the Award

The awardee will be invited to deliver a public lecture in a suitable forum, will be asked to designate an academic institution to receive a grant of \$3,000 from AIP to further the public communication of physics, and will receive a cash award of \$5,000 at the annual fall meeting of the AIP Corporate Associates.

The Award is made possible by a bequest of Andrew Gemant to the American Institute of Physics. The 1988 Award will be the second. The first awardee (1987) is Philip Morrison of MIT.

Procedures

The awardee will be named by the AIP Governing Board in March 1988, based on the recommendation of an outside Selection Committee appointed by Board Chairman Hans Frauenfelder.

Send nominations with supporting material to:

John S. Rigden
Director of Physics Programs
American Institute of Physics
335 East 45th Street
New York, NY 10017

Deadline for receipt of nominations is 31 December 1987.

APPLIED PHYSICS LETTERS

Presents timely, short reports of important results in applied physics. Follows new developments in fields such as semiconductor properties and devices, superconductivity, lasers and their applications, luminescence, nonlinear optics and guided waves, structure and properties of solids, defects and irradiation effects in solids, plasmas, and more.

Weekly • Approx. 2800 pages annually •

\$330 U.S. & Possessions
\$365 Foreign
\$380 Optional Airfreight Europe
\$405 Optional Airfreight Asia
\$330 Microfiche First Class or Airmail

*Reduced rates are available for individuals.
For details, please call (212) 661-9404, ext. 536.

1/87

Please address orders and inquiries to Marketing Services

American Institute of Physics

335 East 45 Street, New York, NY 10017

letters

catcher with the Boston Red Sox. During World War II, Berg left baseball to take an active role in espionage. He was a key US agent in activities to discover the extent of the German uranium (atom bomb) project.

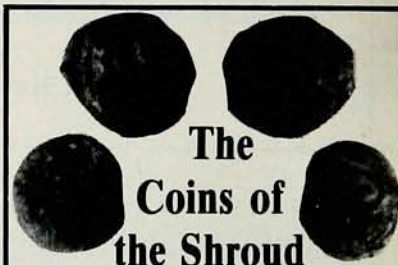
Berg was a member of The American Physical Society. We ask people who knew him to contact us at Top of the Ninth Productions, 2265 Westwood Blvd., #799, Los Angeles CA 90064. We are looking to interview on film people who can help us place Berg in history, along with scientists and friends who may have experiences to talk about and pictures or films of Berg.

NEIL GOLDSTEIN
Palms, California

7/87

Leptons for sale

No wonder the cost of doing elementary-particle physics research is so great. Just look at the price of old leptons! Imagine the price of new ones.



Ancient Bronze Leptons

These coins of Pontius Pilate are now available in limited quantity. Many scholars believe these coins were placed on the eyes of Jesus after the Crucifixion and are now visible on the Shroud of Turin. These ancient coins from the sacred lands of Christendom may have been used by Jesus... His disciples and followers certainly carried them.

Each coin bears a "lituus" or augur's wand from pagan Roman religion, the inscription "Tiberius Caesar" and on the reverse side the date of Tiberius' reign. Each 2,000 year old bronze lepton accompanied with a photo of your coin and a signed certificate of authenticity. As always, your total satisfaction is unconditionally guaranteed.

PLEASE MAKE CHECKS PAYABLE TO:

Jonathan K. Kern

Professional Numismatist
Bachelor of Arts in Numismatics
444 South Ashland Avenue
Lexington, Kentucky 40502

LIMITED OFFERING

Two Thousand Year Old Bronze Leptons

\$79.00 Postpaid

For Visa and MasterCard Orders Please Phone
(606) 269-1614

Kentucky residents please add 5% sales tax.
Please allow 2 - 3 weeks for delivery.

(From *Biblical Archaeology Review*,
July-August 1986.)

KENNETH E. JESSE
Illinois State University

8/86 Normal-Bloomington, Illinois □