

Christoph K. Goertz

Don Gurnett, and Glenn Joyce

Citation: *Physics Today* **45**, 10, 136 (1992); doi: 10.1063/1.2809851

View online: <https://doi.org/10.1063/1.2809851>

View Table of Contents: <http://physicstoday.scitation.org/toc/pto/45/10>

Published by the *American Institute of Physics*

Articles you may be interested in

[Dwight Nicholson](#)

Physics Today **45**, 136 (1992); 10.1063/1.2809850

[Ljubov A. Rebane](#)

Physics Today **45**, 137 (1992); 10.1063/1.2809852

An advertisement for ULVAC featuring four pieces of vacuum technology on a blue background. From left to right: a complex chamber with various ports and gauges; a white rectangular unit labeled 'HELIO 300'; a white rectangular unit labeled 'DTC-22'; and a white cylindrical unit with a motor. To the right of the units is the ULVAC logo and a list of services.

ULVAC

Leading the World with Vacuum Technology

- Vacuum Pumps
- Arc Plasma Deposition
- RGAs
- Leak Detectors
- Thermal Analysis
- Ellipsometers

hard-working but filled with the fun of living, confident but modest. In confronting his own illness, Gerry was a scientist to the end—making the most rational decisions for his own treatment and having the courage to terminate that experiment when he saw that it had failed. Gerald Burns will be sorely missed by all those who came into contact with him.

NORMAN SHIREN
Ossining, New York

FRANK H. DACOL
FREDERIC HOLTZBERG

IBM T. J. Watson Research Center
Yorktown Heights, New York

MARSHALL I. NATHAN
University of Minnesota, Minneapolis

CAROL S. NICHOLS
*Cornell University
Ithaca, New York*



Dwight Nicholson

Dwight Nicholson

Dwight Nicholson, chair of the department of physics and astronomy at the University of Iowa, was slain in his office on 1 November 1991. He was 44 years old.

A native of Racine, Wisconsin, Dwight received his BS in physics from the University of Wisconsin in 1969 and his PhD in physics from the University of California, Berkeley, in 1976, where his thesis adviser was Allan Kaufman. After two years of postdoctoral work with Martin Goldman at the University of Colorado, Boulder, he came to the University of Iowa in 1978. He became department chair after the retirement of James Van Allen in 1985.

Dwight's broad research interests included nonlinear waves in plasmas, solitons, turbulence, deterministic chaos and neural networks. He made significant contributions to our understanding of the plasma instabilities in the solar wind and the ionosphere. Using the ideas of strong Langmuir turbulence, such as soliton and Langmuir wave collapse, he developed new insights into the nonlinear processes involved in ionospheric heating experiments. This work reflected deep insights into basic physics and penetrated into the essence of the physical phenomena. His seminars and lectures were models of clarity and thoroughness, and they were popular with both students and faculty. He was able to communicate to his audience difficult physical ideas as well as his tremendous enthusiasm for physics. Dwight wrote a plasma textbook, *Introduction to Plasma Theory* (Wiley, New York, 1983), that is widely used.

As chair, he devoted a large amount

of time to the improvement of the department. Under his leadership the department added new groups in experimental and theoretical high-energy physics in spite of daunting financial difficulties.

Above all, Dwight had strong humanitarian convictions, which pervaded all his actions. He was very unselfish and incredibly honest. When one research scientist had a brain hemorrhage, Dwight visited him regularly in the hospital and even took care of the scientist's elderly father. Upon learning that a former student who had not completed his PhD was dissatisfied with his attempts to become a writer, Dwight invited the student to visit the department to discuss viable alternatives. Dwight successfully persuaded him to complete his PhD—at another university.

Dwight had a broad, idealistic outlook on life, and he was able to overcome the obstacles of this imperfect world. We will never forget him.

DONALD DUBOIS
*Los Alamos National Laboratory
Los Alamos, New Mexico*

GEORGE KNORR
GERALD PAYNE
University of Iowa, Iowa City

Christoph K. Goertz

Christoph K. Goertz, a professor of physics and astronomy at the University of Iowa, was killed during the shooting incident that occurred at the university on 1 November 1991.

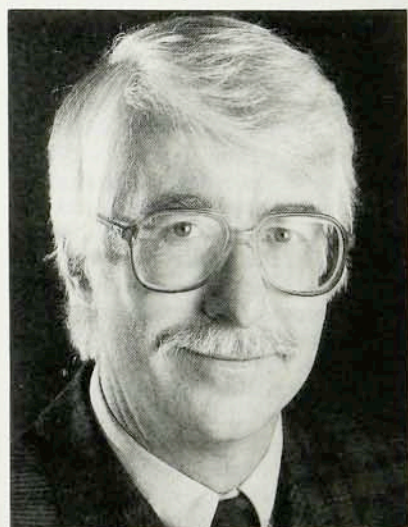
Chris was born in Danzig, Germany, on 1 June 1944. He received his diplom physiker from the Technische Universität Berlin in 1969 and his PhD in physics from Rhodes University in Grahamstown, South Africa,

in 1972, under the direction of T. A. Gledhill. After a short postdoctoral period at Rhodes, he accepted a position at the University of Iowa as a research associate in 1973; the following year he became an assistant professor. In 1981 he was promoted to professor.

Chris's arrival at the University of Iowa occurred during a period of rapid advances in space physics. The Pioneer 10 and 11 spacecraft were providing the first close-up observations of the magnetosphere of Jupiter. Working with James A. Van Allen, Chris quickly became involved in the interpretation of the Pioneer energetic charged-particle data. This early research set the stage for a brilliant career in which Chris became one of the world's leading theorists in the rapidly growing field of space plasma physics. His primary interest was in planetary magnetospheres, particularly those of the outer planets. He played a leading role in the analysis and interpretation of data from the Pioneer and Voyager fly-bys of Jupiter, Saturn, Uranus and Neptune. In the course of his investigations he advanced many new ideas concerning wave-particle interactions, the diffusion of charged particles in radiation belts, kinetic Alfvén waves, double layers and critical ionization velocity phenomena. His skills ranged from the development of simple conceptual models to the detailed analysis of complex systems of interacting particles and fields using numerical simulations. At the time of his death he was pioneering an entirely new area of space plasma physics concerned with the interaction of dust with hot plasmas. These interactions are thought to be an important factor in the evolution of Saturn's rings.

Chris was an outstanding lecturer,

Christoph K. Goertz



a popular teacher and an able adviser to numerous graduate students. In addition to his research activities, he also served on several national and international committees involved with the direction and future of space physics research, and he was the senior editor of the *Journal of Geophysical Research—Space Physics*. Just prior to his death, he had been elected an external scientific member of the Max-Planck-Institut für Extraterrestrische Physik, in Garching, Germany. Chris was one of the most outstanding space plasma theorists of our time, and his enthusiastic discussions, insightful comments and active participation will be sorely missed by all.

DON GURNETT
University of Iowa, Iowa City
GLENN JOYCE
Naval Research Laboratory
Washington, DC

Editor's note: Please see the story in PHYSICS TODAY, December 1991, page 60, for the names of the other victims of the November 1991 shooting incident at the University of Iowa.

Ljubov A. Rebane

Ljubov A. Rebane (née Chagalova) died on 13 June 1991 after a long struggle against cancer.

With her death, the international community of spectroscopists lost a prominent member. Her valuable contributions to the field included introducing the teaching of laser spectroscopy, training a generation of spectroscopists and, in particular, developing international contacts. Rebane made contact with colleagues in countries of the West even in years when it was not simple to do so.

Ljubov was born in Leningrad on 6 September 1929. In 1952 she graduated from Leningrad State University. Her first scientific work, conducted for her diploma thesis using extremely modest laboratory facilities, was on the absorption of supersonic waves in polymer solutions. It attracted a certain attention, and a paper on the subject was published in *Doklady Akademii Nauk SSR*.

With the relaxation of ethnicity requirements for employment in the mid 1950s, when she followed her husband, Karl K. Rebane, to Estonia, she was able to obtain a part-time assistantship in physics at Tartu University. There she started her studies of the luminescence of molecules and

Cryogenic and Vacuum Magnetic Shields

Provide maximum attenuation of interference from Earth's field, pumps and accessories.

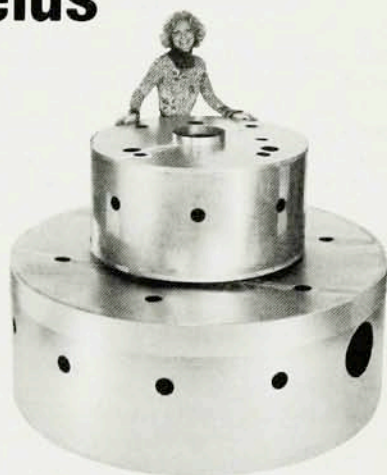
Shields are constructed from our high permeability CO-NETIC Alloy, fully annealed after fabrication.

Send For New CV-1 Catalog



MAGNETIC SHIELD CORP.
PERFECTION MICA CO.
740 North Thomas Drive
Bensenville, IL 60106, USA
Phone 708-766-7800
TWX 910-256-4815
FAX 708-766-2813

Please Call or Write
For Design Assistance



Circle number 82 on Reader Service Card

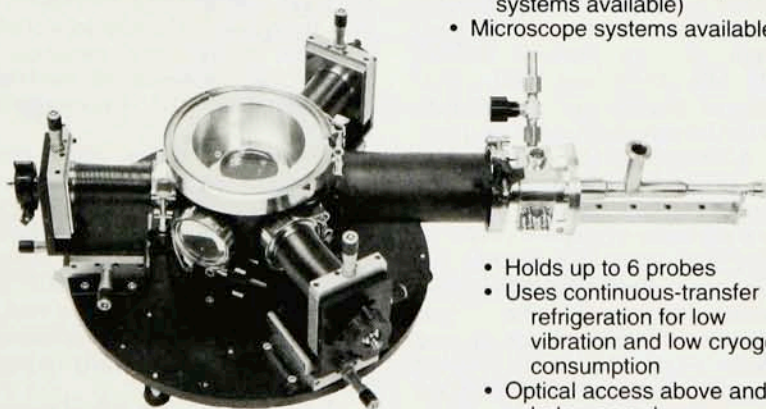
RMC

CRYOSYSTEMS

ANNOUNCES STATE-OF-THE-ART MICROMANIPULATOR SYSTEMS
FEATURING IN-SITU POSITIONING OF ELECTRICAL PROBES FOR
MEASUREMENTS FROM 4 TO 500 K

IN OUR THIRD
DECADE OF SUPPORT
TO THE SCIENTIFIC COMMUNITY

- Frequencies from dc to 50 GHz
- Contacts cover from 25 mm x 25 mm to the whole wafer
- Holds up to 4 in. wafers (larger systems available)
- Microscope systems available



- Holds up to 6 probes
- Uses continuous-transfer refrigeration for low vibration and low cryogen consumption
- Optical access above and below sample
- Fast sample turn-around

RMC, 4400 S. Santa Rita Ave., Tucson, AZ 85714
Tel (602) 889-7900 Fax (602) 741-2200

Circle number 105 on Reader Service Card