

We Took This Picture with Just One electron/msec ...HONEST!

With our New, High Resolution
Imaging Particle Detector



30 sec exposure

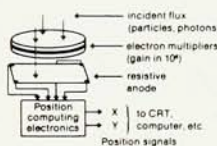
Uses

Detector for electron spectrometers; mass spectrometers; UV/X-Ray imaging systems; particle physics experiments, etc.

Features

Accurate, high resolution imaging of ions, electrons and photons.

How it Works



A particle strikes the electron multipliers producing a pulse of $\sim 10^6$ electrons. This charge is collected by 4 electrodes on a resistive anode.

The (x,y) position of the particle is computed from the charge division among the electrodes. Various photocathodes in sealed tubes are available.

SURFACE SCIENCE LABORATORIES, INC.

1206 Charleston Road • Mountain View, California 94043 • (415) 962-8767 • (213) 384-6904

Circle number 89 on Reader Service Card



letters

that many of the problems would solve themselves.

H. L. ARMSTRONG
Queen's University
Kingston, Ontario

6/83

Perhaps a clue to "the crisis in high-school physics teaching" can be found by comparing the latest (6th) edition of *Physics* (Physical Science Study Committee) with earlier editions. Missing is the chapter "What is Physics," together with any discussion of orders of magnitude and scaling arguments. (In effect, Chapters I through IV of the first edition are no longer there.) The latest edition starts right with the business of motion along a path ($d = vt$ and so on). And though these deletions may make it easier for school-of-education graduates to teach "physics" using the book, I am afraid it means that much of what I believe to be physics will never be taught.

JAMES E. FALLER

Joint Institute for Laboratory Astrophysics
6/83
Boulder, Colorado

More on Turkish repression

In May 1982 (page 130) you published my letter drawing attention to the imprisonment of the Turkish physicist Yeter Göksu-Ögelman. Ögelman had been accused by the military authorities of having been president of the "Progressive Women's Association" of Ankara in the 1970s. The authorities alleged that such a body was an illegal organization.

E. Timms, of Caius College, Cambridge, a brother-in-law of Ögelman, has now given me the follow-up. He states that, according to a report in the (UK) *Times* of 13 January 1983, the following situation exists in Turkey:

Since September 1980

- ▶ 28 000 have been jailed by the military courts, for between one and thirty-six years, as political prisoners
- ▶ 10 000 detainees are awaiting trial
- ▶ 7000 further people are under investigation
- ▶ 3000 of those on trial face the death sentence.

Ögelman, whose case was followed by Amnesty International, was jailed for eight months without trial in a prison where the temperatures reached 105 °F in the shade, and with three to a bed. She has now been acquitted and is now attempting to reapply through the courts for re-instatement in her university teaching post. (Several hundred university teachers are included in the above figures.)

Governmental repression is still practiced 350 years after Galileo was brought before the Inquisition and

NOW AVAILABLE STYLE MANUAL

(third edition)

for guidance in the preparation of papers for journals published by the American Institute of Physics and its member societies

This edition provides the following:

Summary information for journal contributors
Preparing a scientific paper for publication
General style
Mathematical expressions
Figures

This valuable guide can be yours for only \$7.50 prepaid (\$2.00 billing charge if not prepaid).

Send all orders to:

AMERICAN INSTITUTE OF PHYSICS
Department BN
335 East 45 Street
New York, NY 10017

forced to sign a statement denying his beliefs and 400 years after Kepler's mother was imprisoned for a year under accusations of being a witch. Indeed one has only to look at the persecution of Einstein (by the German authorities in the 1930s) or Oppenheimer (in the US in the 1950s) or Sakharov in the USSR today to realize that fear of learning may well continue for the rest of human history to be shown by those who seek power over others.

Surely, those who seek both political power and respect will have to find truth, not suppress it. That may be hard, but in the long run human society cannot fail to benefit. Meanwhile, what can anyone do, apart from putting aside the newspaper and deprecating such governments? Very little; but we can always object, and (as suggested in a *Nature* editorial of 18 March 1982) grant-giving bodies and organizers of international conference can perhaps attempt to take into consideration the above matters, for they do hold a certain degree of power.

J. D. NIGHTINGALE
State University of New York
New Paltz, New York

7/83

Question of experience

In your article on synchrotron radiation research (June, page 48), the figure caption on page 49 erroneously states that aluminum foil is used to "distribute the heat" during bakeout of the vacuum equipment. As any experienced vacuum scientist will tell you, aluminum foil is used to short out the heating tapes used for the bakeout.

RICHARD A. DI DIO
EDWARD D. ADAMS
University of Pennsylvania
Philadelphia, Pennsylvania

6/83

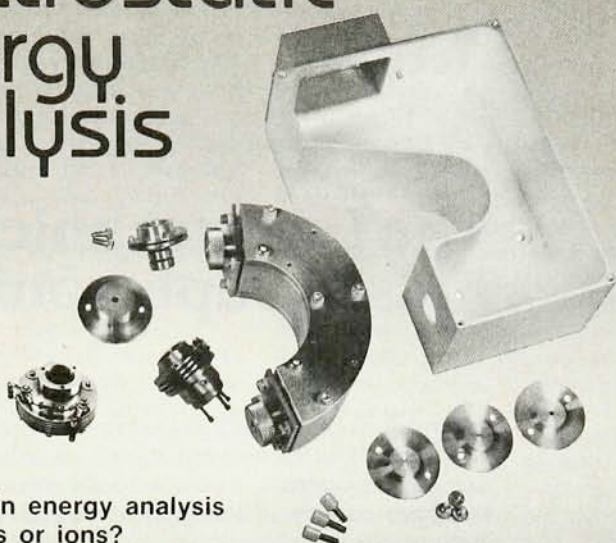
Post-war time capsules

In recent issues there has been an effort underway to mobilize the scientific community against the threat of global nuclear war. I would like to suggest a kind of pessimist's alternative to these proposals. While inherently defeatist in outlook, my suggestion has the advantage of being an almost purely scientific undertaking.

Specifically, I would like to see a project to create a number of space-borne time capsules or libraries. In the event of global catastrophe, these capsules might preserve some useful record of our world culture, science, and so forth.

To begin with, we might rent space on several shuttle flights to place microfilm libraries in Earth orbit. Later deep space probes could carry away certain selected representative works

electrostatic energy analysis



Interested in energy analysis
of electrons or ions?

We provide an economical, tested line of modular equipment and provide design services tailored to your needs. Shown above: CP-602 Dual Channelplate Charged Particle Detector, EL-301 Einzel Lens, EG-401 Electron Gun, AC-901 Double Focusing Electrostatic Energy Analyzer, and SA-901 Shield Box. Call us for prompt and friendly attention.

comstock

P.O. BOX 199 OAK RIDGE, TENNESSEE 37830 (615)483-7690

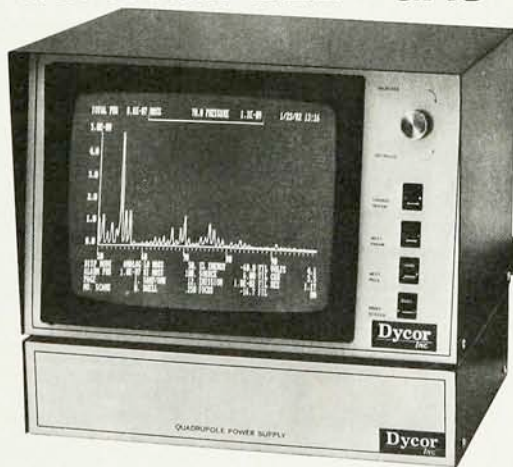
Circle number 90 on Reader Service Card

QUADRAPOLE GAS ANALYZER

COMPLETE INSTRUMENT

\$4995.00

(MADE IN U.S.A.)



STANDARD FEATURES

- 1-100 AMU
- Faraday Cup Detector
- Dual Filaments
- 100% Front Panel Control
- 12" High Resolution Display
- Graph or Tabular Data Display
- RS232 Computer Interface
- 10^{-4} to 5×10^{-12} Torr Pressure Range

OPTIONAL FEATURES

- 1-200 AMU
- Sample System For Higher Pressures
- Graphics Printer For Hard Copy

With Dycor's Quadrapole Gas Analyzer you will no longer have to guess about what's in your Vacuum System. A glance at the screen will tell you exactly what is there. Our engineers would be happy to discuss your application.

Dycor
Inc.

2419 Smallman St. • Pittsburgh, PA 15222 • 412-261-6218

Circle number 91 on Reader Service Card