

## PHIMSY

### For the man with no needs

A recent gift delights me. It looks like two 1.75-inch pieces of wire, one red, one blue, held together at the ends with yellow tape. It has all the desirable attributes: inspected, checked, trouble-free, meets or exceeds specifications, no moving parts, simplicity of design, low cost, protective carrying box. What else could you want?

The literature tells me that you too can have a genuine improved no. 7 Bunab for sending \$0.98 to Orville K. Snay & Associates, 111 North Jefferson, Mason City, Iowa. I like attacks on jargon and other nonproductive conventions.

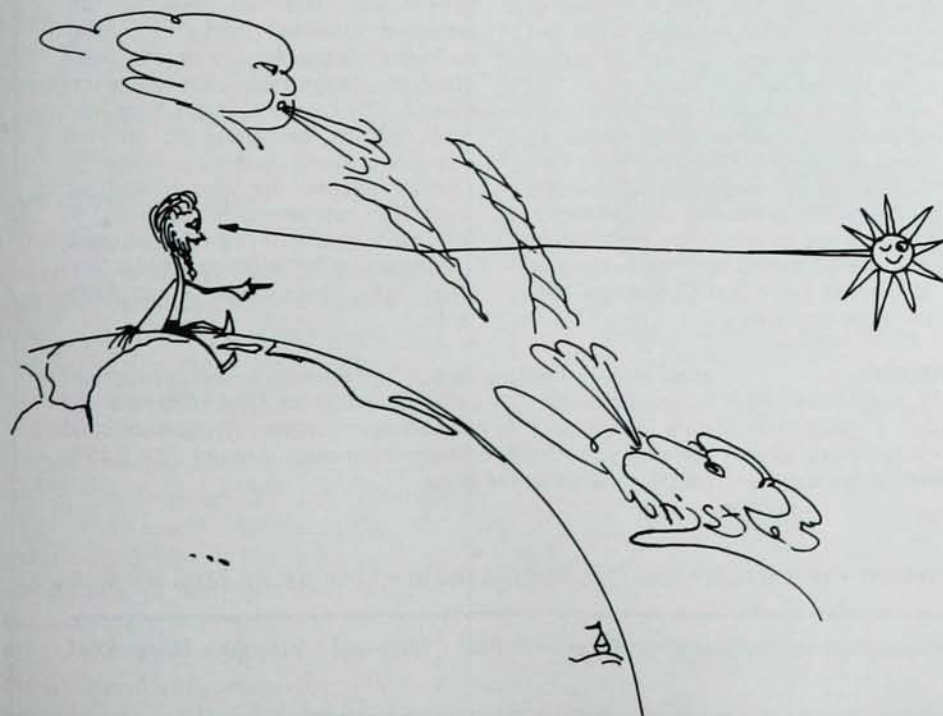
### Schlieren Effect

Twinkle, twinkle, little star,  
Schlieren effect near and far  
Tricks your flick'ring now and then  
By a gradient of  $N$ ,  
Which, perturbed by wind and  
weather,  
Makes your rays go titter totter.  
You stand firmly where you are  
While you're twinkling, little star.

BOYE AHLBORN

University of British Columbia

(illustration by the author)



### NBS metric wall chart

As you carry on the crusade for better units, I hope you have the National Bureau of Standards wall chart titled "The Modernized Metric System." Last January a copy of it, reduced to one-third size, was a two-page spread in the NBS *Technical News Bulletin*. It was part of an article called "Brief History and Use of the English and Metric Systems of Measurement." You can have your copy of the chart for 50¢ to the Government Printing Office, and in its many colors it makes a handsome decoration.

### A page is a space is a page

Is there a Freudian slip, someone asked me, when *The Physical Review* has a title inside about "page charge" and the title on the outside cover has the words "space charge?"

### Our German equivalent

I love to read the higher forms of flattery, especially when they flatter me and the boys I work with. Here's how a promotion letter started out: "I know you are interested in reaching the German market and I, therefore, want to acquaint you with PHYSI-

Inside this new quadrupole magnet is some very interesting engineering which results in a beam of beauty. (Sample: magnetic/geometric coincidence is within  $\pm 0.003$  inch.) Mechanical symmetry is achieved by utter simplicity of fabrication and assembly — simple, but ingenious nevertheless. Magnetic symmetry follows as surely as Planck's constant is constant.

Barrel quads are traditional and they look nicer, but they have twice as many parts and require loving adjustment. This one requires none. And the magnetic field stays beautiful over the full range of current. Minimum clear aperture 2.06 inches, max. gradient 1.0 kG/in., effective pole length 9.1 inches.

We're accelerator people, too, and we supply whatever an accelerator needs. For instance, there are 17 other quads in this magnet family. See below, too. Then just ask.

## FINE FOCUSING MAGNET

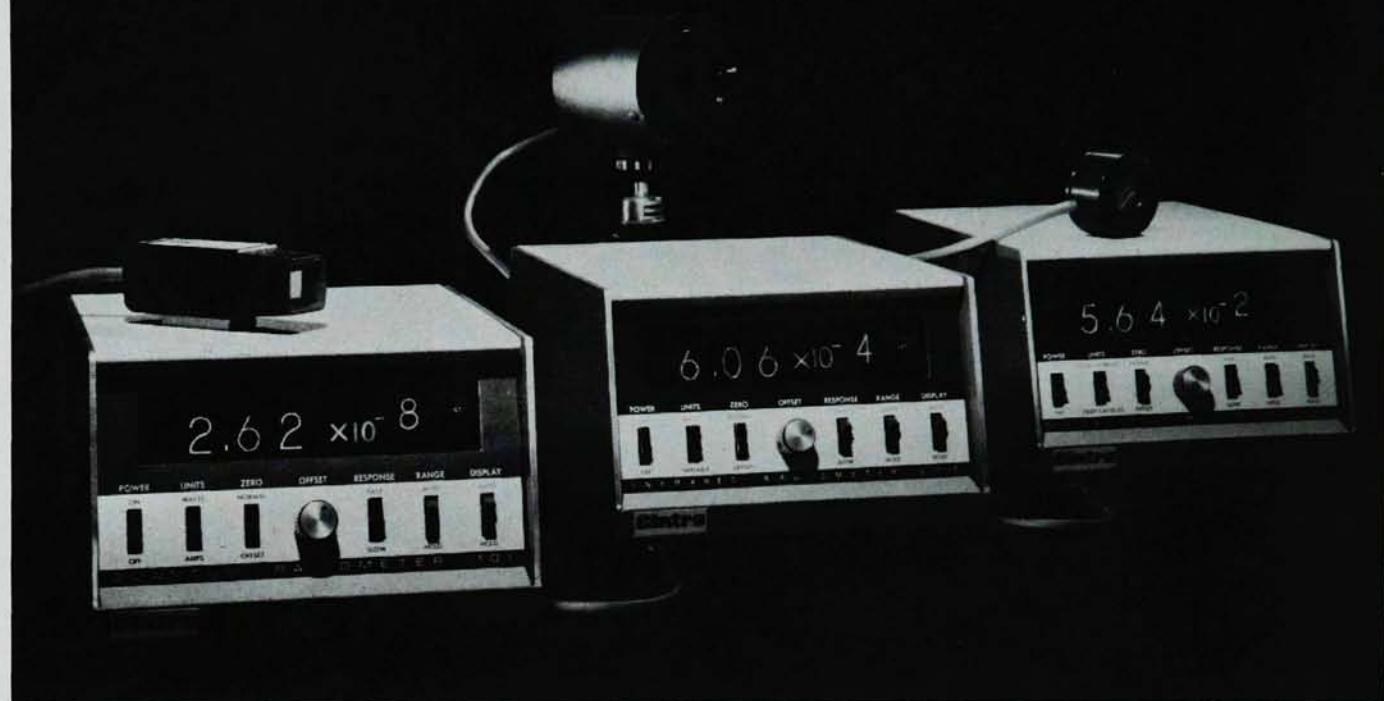


### HV HIGH VOLTAGE ENGINEERING

EQUIPMENT DIVISION, Burlington, Mass. 01803 □ Suppliers of accelerator accessories: scattering chambers, beam profile monitors, electrostatic steerers, NMR fluxmeters, beam line plumbing, radiation-resistant metal seals, Mossbauer cryostats and furnaces targets, complete beam-handling systems, standard and custom electromagnets, sources.



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## A SELECTABLE NARROW SPECTRAL BAND RADIOMETER: UV TO NEAR IR ...

### Model 101 Quantum Radiometer

☐ Measures both **watts** and equivalent **photons per second** ☐ Automatically ranges from  $10^{-10}$  watts (or optical amperes) resolution to  $10^{-1}$  full scale with provision for higher range levels. ☐ Interchangeable, **calibrated, plug-in probes** pre-select the desired narrow spectral band, providing for direct readout in **absolute units** ☐ Direct readings of **irradiance** and **spectral density** ☐ **Fractional percent long term repeatability** ☐ Special purpose clip-ons (i.e., filters, apertures and fiber optic microprobes) are available.

## A SPECTRALLY FLAT RADIOMETER: UV TO FAR IR

### Model 202 Infrared Radiometer

☐ Stable, flat response, **black body thermopile detector** with a one  $\text{cm}^2 \times$  one steradian total effective field of view ☐ Readout in **watts, watts per  $\text{cm}^2$  or watts per  $\text{cm}^2$  per steradian** ☐ Automatically ranges from  $10^{-7}$  watts resolution to  $10^{-1}$  full scale with provision for higher range levels ☐ Fixed absolute measurements or variable gain ☐ Optional filters, shutters and irises maintained at thermopile temperature to maximize stability ☐ Thermally floating thermopile housing eliminates the effect of ambient temperature changes.

## A SENSITIVE DIGITAL PHOTOMETER: TRUE VISUAL RESPONSE ...

### Model 150 Digital Photometer

☐ Specially corrected ultra stable sensor **accurately matches the CIE standard observer curve** ☐ Ideal for light measurements in the presence of considerable non-visible radiation ☐ Direct readout from  $10^{-5}$  foot candles resolution to  $10^4$  full scale in a single automatic range ☐ Clip-on adapter for direct readings from  $10^{-5}$  foot lamberts resolution to  $10^4$  full scale ☐ Special purpose clip-ons (i.e., filters, apertures and fiber optic microprobes) are available.

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able, plug-in sensing heads ☐ Remote function programming capability ☐ Selectable fast or slow response ☐ Hold range and hold reading controls ☐ Silicon solid state design incorporating integrated circuits ☐ 0.05% range calibration resistors.



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KALISCHE BLATTER the German counterpart of Physics Today."

### Some attention from outside

When any of you fellows make noise in the world of nonphysicists, it makes me happy. A recent joy was the 2.5 pages that the 29 March *New Yorker* gave to Polykarp Kusch in its prestigious opening section called "The Talk of the Town." The interview honored Kusch's elevation to vice-president and dean of faculties at Columbia.

My editor friends tell me the interviewer's most perceptive question was, "Do you always talk this way?" (He does.)

The item was full of insights into what makes Kusch, with or without a Nobel prize, unique among physicists. One that we enjoyed was his reflection on his undergraduate physics at Case: "heavily classical . . . technically oriented . . . one course I took was called Foundry Practice."

"At Columbia, after the war," Kusch is quoted as saying, "everybody worked like mad." He explained that wartime physics was sterile with "few new conceptual ideas."

I liked the concluding quotation: "My faith in the future of learning and in the future of knowledge is very great, and my faith in the university as the seat of learning and knowledge is very great." So be it.

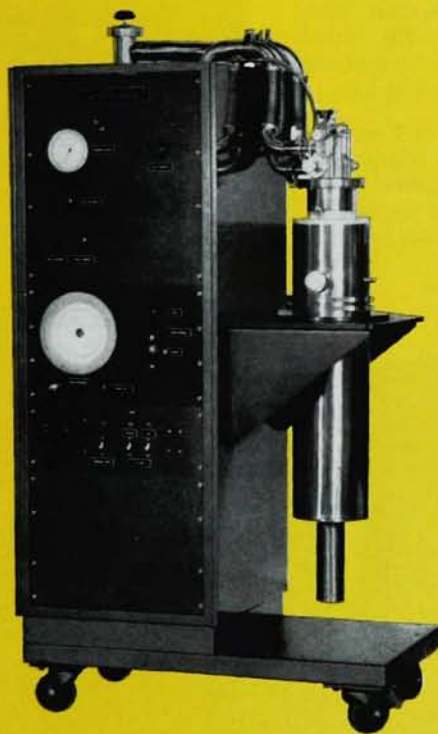
Meanwhile a former Kusch student at Columbia, Harold Brown, who was Secretary of the Air Force and is now Cal Tech president, has written "Security through Limitations" in the April *Foreign Affairs*.

### Never trust anybody

Here I am writing PHYSICS TODAY copy on an airplane. One of the passengers has protested that the captain is not taking him where he wants to go. He suggested that the captain move aside and give his seat to the protester, who is under 30. That brought further argument from a man under 20. The logic was inescapable; the younger man was more eligible than the middle-aged one. The logic was so compelling, in fact, that the youngest passenger on the plane, a five-year-old, is now in the captain's seat. We are all wondering where he will take us and how well he will land. □

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