

PHIMSY

The geography of parity

Max Dresden of Stony Brook raises an entertaining question: Has anybody in the southern hemisphere repeated the experiments that demonstrate nonconservation of parity in weak interactions? Maybe the rotation of the earth causes the asymmetry. He computed the coupling required and says the speculation is not unreasonable. If you have any southern-hemisphere Co^{60} lying around, please send it to Dresden.

Physics learns the hard sell

"Legalize PHYSICS" reads a splendid black and shiny crimson bumper sticker that Roderick Riggs sent to me recently. It seems like a good idea, and I was impressed that you eggheads dig the latest promotion methods. "How come?" I asked Riggs, who is head of physics and engineering at Jackson (Mich.) Community College.

He told me that a year ago his department was looking for ways to contribute to a campus "physics-awareness" program. From 300 entries in a bumper-slogan contest, the judges selected "Legalize Physics" as the winner. Subsequently Riggs has distributed, free, 2500 stickers and lapel pins reading " $E = mc^2$ " and " $F = ma$," but the movement is getting out of hand, and he has raised his prices to cover costs: 20 cents for a sticker (9.5×37 cm with adhesive installed) and five cents



per pin. Send your checks to R. D. Riggs; he throws in postage.

Reception has been rewarding, and the pins and stickers have inspired imitators and good fellowship. (How else do you find out that the girl in the next car is a physics major?) Derek Prouse at Wyoming distributes "Support Your Local Physics Department," and Robert Luttermoser of Lawrence Tech in Michigan has $E = h\nu$ buttons that he gets through Riggs.

Of course they don't pay me enough around here to support a car; so I put the sticker on my wastebasket.

To learn big, study small

It always seemed to me that I learned about little things by working from larger to smaller ones, by starting with large distances and gradually working my way down to smaller ones. After I could play pool, I decided that I knew what billiard-ball collisions among atoms must be. First you find out what happens with things that are 1 cm across; then you divide to find out what occurs when things are a ten thousandth of a centimeter across and so on down to a ten millionth.

Not so, says John Wheeler of Princeton. He tells me that by investigating what happens at small distances we learn what happens at big ones. When Ernest Rutherford got down to 10^{-13} cm with his alpha particles, he tells me, physicists began to understand the atom, which is a hundred thousand times as big in diameter. When people wanted to understand work hardening in finger-size pieces of metal, they had to learn about dislocations that need only a ten thousandth of a centimeter in which to occur.

The cost of calories

"Ah, the mysteries of thermodynamics," wailed one of our editors. "On



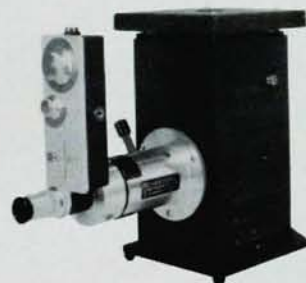
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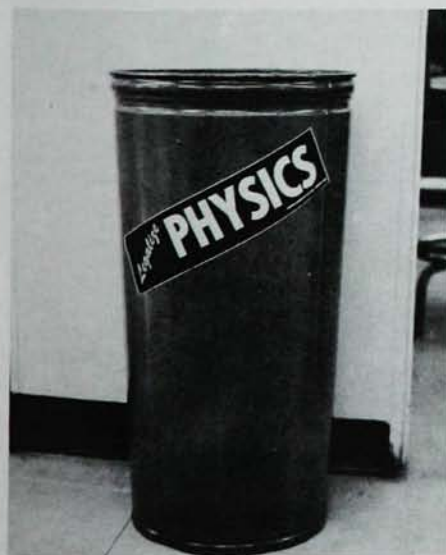


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First Avenue a truck is pouring calories into loads of snow to melt it and disgorge a big stream of water. Meanwhile on the West Coast they are spending money and inconvenience to get the calories in oil out of the ocean bottom. All those expensive calories to melt snow when one block away is the East River, really an arm of the Atlantic Ocean. They could dump their snow there and get the calories to melt it for nothing."

Sonnet on Maxwell's Equations

When e'er you rive the curlèd Field
With displaced fluxes sloped by time,
The radiant wavelets fast must yield
To primal signals' pantomime.
The Tensors clash; conduction's done;
The CurlGrad conquers fields diverse;
The speeding beacons quickly run
To calibrate the Universe.
We can not see this wingèd flight
Of stresses trapped in ether's net;
Yet who denies the heavens bright
Portrayed by Maxwell's alphabet?
We surely can not help but see
That one man glimpsed eternity.

RICHARD E. SWING
Rockville, Maryland

Fusion power at last

Some physics problems get quietly solved, and nobody tells me about it. For example, the National Academy of Sciences, National Research Council and National Academy of Engineering (how authoritative can you get?) tell me in their December *News Report*, "Many forms of aquatic animal and plant life are being threatened by tons of heated water being spewed forth from electric and thermonuclear generating plants into the nation's rivers, lakes, and coastal waters." The editors tell me that the secret of those non-electric thermonuclear power plants has been protected as effectively as plans for Soviet space shots.

Quarks are up—and down

A paradox, a paradox: Speaking as a session chairman at the recent Coral Gables high-energy conference, Maurice Goldhaber noted that although the belief in quarks appears to be gradually decreasing, the fits they provide to experimental data seem to be constantly improving. □

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