

PHIMSY

More fun with decimal places

Don't take the next place of decimals too lightly, says L. Plaut, who writes to me, as follows, from Groningen, The Netherlands: "With reference to 'Romance in Six Figures' (PHYSICS TODAY, January, page 9) it may be worthwhile to mention that Ejnar Hertzsprung, former director of the Leiden Observatory and well known on account of the Hertzsprung-Russell diagram, always said that his motivation for astronomical research came from his curiosity about the next decimal. What this can mean is shown by the enormous output of Hertzsprung's work (see, for instance, A. V. Nielsen, *Sky and Telescope* 35, 4, 1968)."

For everyone his own way

Somebody was trying to teach me to read the table of contents of *The Physical Review*. Among its symbols were "⁶Li," "²⁵Mg" and "Bromine-75." You girls and boys have a complicated subject, and I know you need signs and symbols to talk about it, but I refuse to believe what my friend was saying: that all of those ways of saying it stand for the same thing. He must be putting me on.

My friend kept telling me that the article with "⁶Li" in the title was about "lithium six." You know and I know and my friend knows that what you say afterward you write on the right. I may not know what "lithium six" is, but I'm sure it can't be ⁶Li. If it were, what would "Li⁶" stand for?

Then there was another journal with the title "The NASA Method for Calculating Uniform Clusters." My friend tried to tell me, "Neutron Absorption Synthetic Approach." Doesn't he realize I know you scientists and your passion for clarity and precision? How ignorant can he think I am?

Detective work with infrared

Last December I told you that neutrons had played detective in checking art authenticity. But such detective work is neither new to physics nor limited to neutrons, says W. D. Perkins of the Perkin Elmer Infrared Product Department. He sent me a copy of

the *PE Instrument News* (17, no. 2, 1, 1966) that tells some interesting stories about using infrared spectrophotometry to inspect resins, varnishes, dyes and waxes in paintings and ancient artifacts.

You incredible witnesses

From a *Washington Post* story about physicists and their ABM protest: "A large number of scientists are coming out of their little dark laboratories' to give the public their opinion on weapons, Charles Schultz, A University of California physicist, told a group of House members."

That Caliban image of scientists huddled in their caves doesn't seem appropriate for most of you physicists I meet. If it is accurate, though, Charles Schultz (whoever he is) is performing a service in discrediting you before your congressmen.

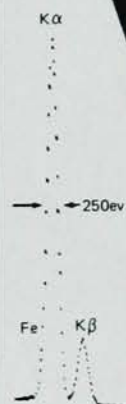
I am no expert on weapons, strategy and overkill, but I know the subjects are complicated. I hope decision makers will not accept their advice from persons who emerge from little dark laboratories to give it.

Lots of Peltier devices

DEAR PHIMSY: Your February remarks express surprise that anyone would "make any practical use of the Peltier effect." Actually a number of laboratory devices such as a Thermo-electric Immersion Cooler and photographic developing trays have been marketed since 1963. Household items using Peltier thermal pumps have included drinking-water coolers, beer-keg coolers and several sizes of refrigerators, among them a reversible Buffet Bar sold by Sears Roebuck (see 1964 summer catalog for full-page ad, page 1382).

The hot-and-cold-food, cart-and-tray system for hospitals credited to Philip Golden of Consultants Collaborative reminds me of the (Peltier) Wonder-Bowl demonstrated to a large meeting in February 1961. Initially cold shrimp and hot Swedish meatballs were served from the Wonder-Bowl, which had two compartments for hot foods and one for ostensibly cold. But as the "social hour"

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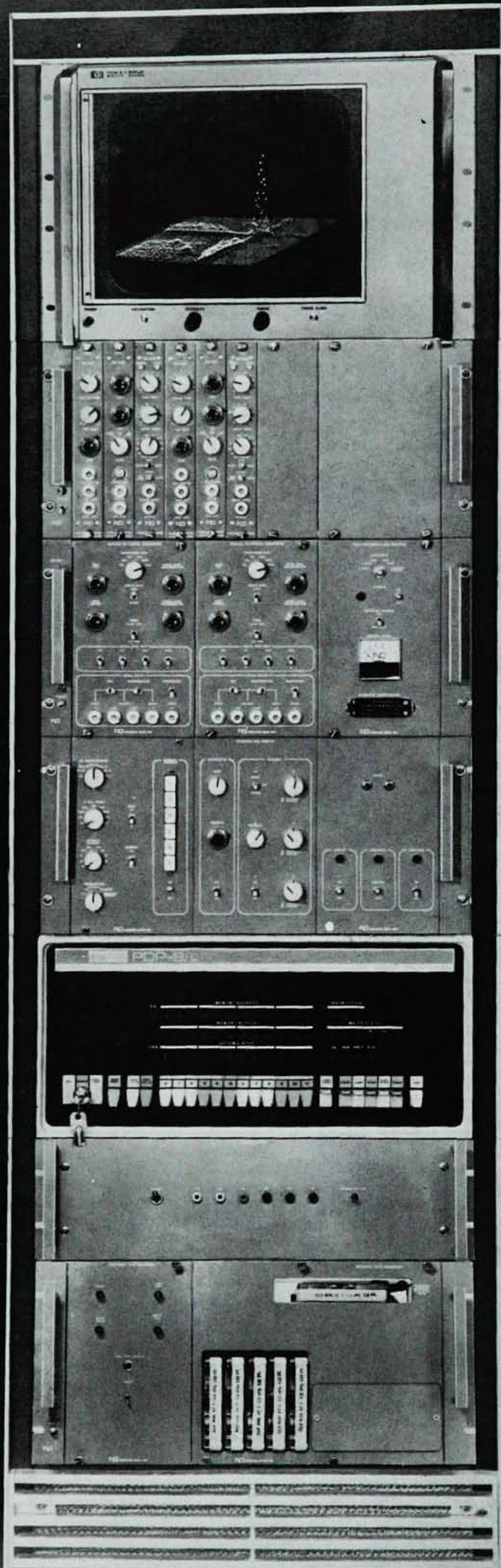
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stretched beyond two hours, meatballs boiled in their gravy while remaining shrimp became warmer than luke. When thermal energy is pumped continuously by any means, heat generated within the pump must be dissipated.

EVERETT F. COX
Benton Harbor, Mich.

The function is the particle

"The wave function is the particle; the particle is the wave function," murmured my boss as he was glancing through a learned journal at coffee break. "Here I read, 'Psi squared gives the probability that the particle is in delta x.' Sometimes you read that the same quantity tells the amount of time that the electron spends in a volume element. Such statements are self-contradictory. They imply that the wave function is one entity and the particle is something else quite separate and distinct. The one I just read implies that 'the particle' is or can be in delta x while the wave function has finite amplitude elsewhere. I say that when the particle is in delta x, its wave function must be a delta function and when the wave function has amplitude over an extended region, the particle is spread over the extended region. If theorists would start to think this way, they might get on with the job and escape this dualism trap."

Now what was that all about?

Weston Batavia Fermi machine

I'm having trouble keeping up with that new accelerator they're building out in Illinois. At first I was confused when they kept changing the numbers: Was it a 400-GeV machine or a 200-400-GeV or a 200-GeV or maybe a 400-BeV?

Then they changed the location. Just when I felt confident talking with the editors about the "Weston machine," Weston disappeared from the map, and everybody was calling it the "Batavia machine."

The only thing to do was stick with the formal name: the National Accelerator Laboratory. Now that's been changed too. Glenn Seaborg wants to call it the "Enrico Fermi Laboratory." Look for me at the 1972 dedication. I'll be the guy asking speakers, "Are you sure now?" □

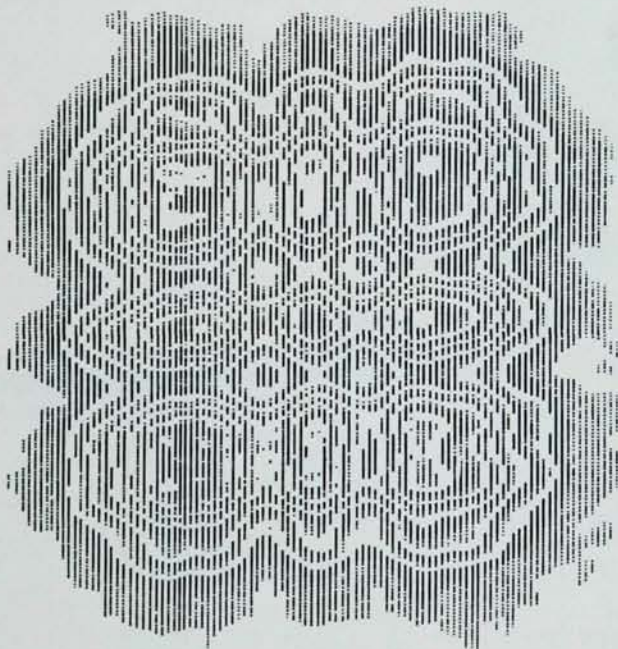
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