PHIMSY

A degree becomes a kelvin

What you used to call "°K" is now a kelvin. The unit is defined as 1/273.16 of the temperature interval between absolute zero and the triple point of water. You can have milli- and microkelvins, and standards makers suggest "K" as your abbreviation.

Miscounted those fringes

"Dear Phimsy," writes John D. McGervey from Case Western Reserve, "You slipped on measuring the wavelength of light with a ruler (PHYSICS TODAY, February, page 21). If you shift the ruler to use 1/64-inch markings instead of 1/32-inch marking, you get half as many fringes, not twice as many.

"It is amusing to watch alternate fringes disappear. The odd ones disappear because rays from the odd 1/64-inch markings interfere destructively with rays from 1/32-inch markings (just as 'in-between' planes in a crystal lead to a zero 'structure factor' for certain directions in x-ray diffraction). Incidentally, you can see the effect with decimal divisions provided your ruler, like the one I used, has 1/2-mm as well as millimeter markings."

Astronomer's stamp

Have you seen the stamp that Czechoslovakia made to honor its new telescope? Last August the Czechs dedicated their 24-meter reflector at Ondrejov. The stamp shows the telescope and a galaxy; the first-day cover, which was labeled in honor of the 13th general congress of the International Astronomical Union held last summer in Prague, shows the marvelous clock at the Prague city hall.

Clarity, justice, confusion

We really believe in clarity and consequently like very much the quote that Lawrence Cranberg recently attributed to Confucius:

"If language is not correct, then what is said is not what is meant; if what is said is not meant, then what ought to be done remains undone; if this remains undone, morals and art will deteriorate; if morals and art deteriorate, justice will go astray; if justice goes astray, the people will stand about in helpless confusion."

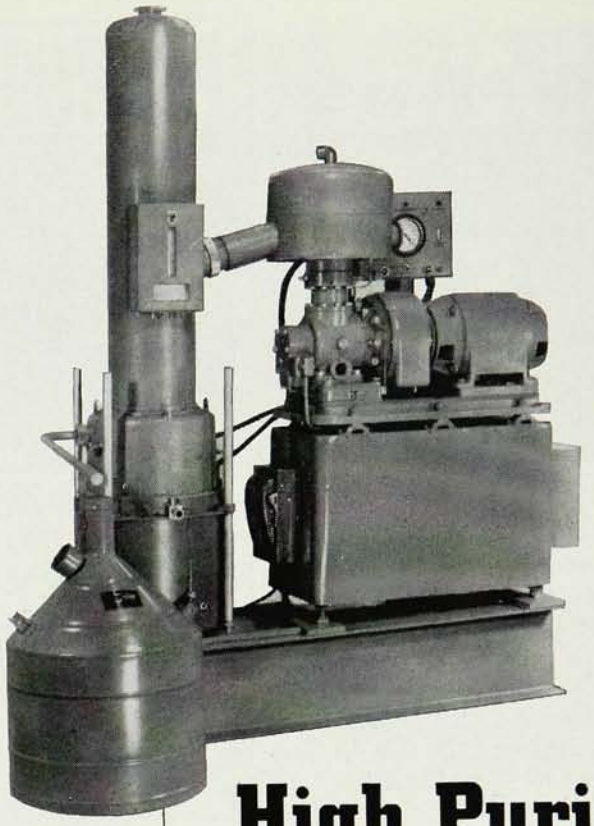
What is c if not a speed?

When is a velocity not a velocity? Sir Martin Ryle, Cambridge, points out that we now define the second in terms of an atomic transition and the centimeter in terms of the wavelength of an atomic spectral line. Soon we will be able to measure atomic frequencies directly. Then we can know the velocity of light (and other constants dependent on it) with no need for a clock or a ruler.

Toward better retrieval

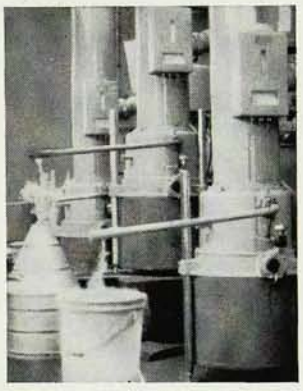
Indexing is not taken lightly around our shop. Arthur Herschmann, former *Physical Review* editor and currently

CZECH STAMP and design for its first-day cover.



Basic Model A Liquifier provides high reliability, low maintenance, trouble-free operation. Added fractionation column provides contaminant-free liquid nitrogen.

High Purity Liquid Nitrogen Simply, Conveniently Extracted From Air



Plant Photograph
Nitrogen Cryogenerator units

Fully automatic push-button generator system produces cryogenic liquid for on-site needs.

Basic Norelco A & B Cryogenerator® units efficiently supply liquid air in quantities sufficient to meet the needs of most industrial, scientific and technological applications. In-plant or laboratory installations provide the incomparable convenience of continuous or intermittent supply, eliminating temporary shortages or dependency from outside sources.

Where liquid nitrogen is essential, economically produced quantities may be as easily obtained by adding an air separation column which produces free-flowing 99.5% (minimum) pure liquid nitrogen from fractionation without compression or moving parts — assuring freedom from impurities.

Units require only spot-check — all functions and control devices perform automatically. For nitrogen production, Model A provides a nominal output of 7 liters per hour. Model B — 28 liters per hour.

We produce numerous sophisticated systems. Most recent is a 4 pound miniaturized Cryogem® unit which, with infrared sensing, provides daylight clear vision in the black of night. Non-destructive quality testing employing refrigerated infrared sensing is fast growing in industry.

Whenever you run into a cryogenic problem call us. We have a vast engineering competence extending from "packaged" through custom designed systems. Invite us to help solve your problems.

Norelco® **CRYOGENIC DIVISION**

NORTH AMERICAN PHILIPS COMPANY, INC.
Post Office Box 2200, Ashton, Rhode Island 02864

C-67

an information specialist at the American Institute of Physics, tells us that when Simon Pasternack, *Physical Review* editor, faced the problem of where to list a paper on the plastic properties of mattresses, it wound up under "relaxation phenomena."

Don't listen to my opinion

"In my opinion . . ."

That was as far as I got. This fellow I had just met in Chicago interrupted me.

"Phimsy, who are you to have an opinion? You're surrounded by faculty members, vice-presidents for research and committee members."

"A cat can look at a king, professor," I answered. "I didn't know I had to be anyone. I thought the opinion stood or fell on its own strength or weakness."

"That's your opinion, Phimsy, but if you want to remain my friend, you won't press it."

Well, I need all the friends I can get if I'm not to lose my corner under the stairs. So I promised the professor I'd try to keep from having opinions, and if any come out accidentally, I hope he (and the rest of you) won't take any notice.

Keeping builders up to date

If you're spending five years building an accelerator and fear you might fall behind in your physics, call in Robert Serber. Gloria Lubkin bumped into him at the National Accelerator Laboratory recently and asked, "What are you doing here?"

"I'm bringing culture to Weston," he replied and explained that he flies out from Columbia every Tuesday and lectures to the group that is building the 200 GeV. It's not a new kind of job, though. He did the same thing at Berkeley during the building of the 184-in. (468-cm) cyclotron and at Brookhaven during Cosmotron construction. It wasn't necessary during the building of the AGS because Cosmotron research, which was going on by that time, was supposed to keep AGS builders informed.

The 184-in. lectures were reproduced under the title *Serber Says*, and their author got an additional dividend because he got the idea for his optical model of the nucleus while he was preparing them. □