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COVER: Laetrile (the chemical amygdalin) is found in apricot pits and some other fruit kernels. Aside from the political and philosophical skirmishes over whether this natural chemical should be legalized as an anticancer drug, the real question boils down to what science has to say about its safety and effectiveness. See p. 92. (Photo: Volker Zinser)

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AUGUST 6, 1977

LETTERS

The rugged road to metric

I do believe that you have stirred up another hornets' nest of emotion with the article on metric conversion (SN: 7/16/77, p. 42).

Metric does offer some advantages: "Everybody else is doing it; my computer can learn it easier; it makes more sense (if you can understand it at all)." On the other hand, it presents a couple of slight inconveniences, too: Every gasoline pump in the country will have to be converted; almost every road sign in the nation will have to be replaced; every weight-measuring device will have to be converted or scrapped; every mechanic, machinist and serviceman will have to buy a new set of metric-sized tools; every surveyor will have to melt down his measuring chain, each landowner will suddenly (or slowly) become owner of XX.XXX hectares of property.

Supposedly, it "makes more sense" for water to be liquid from 0° to 100° Anything than from 32° to 212° Anything. However, degree for degree, Fahrenheit is 80 percent more accurate than is Celsius. Furthermore, 1° F is about the slightest temperature change that most people can detect (and I, for one, can certainly detect a change of 1° F). So how is it that the Celsius scale makes more sense than the Fahrenheit scale? The only *really* sensible scale would be one based upon absolute zero, such as the Kelvin scale.

Those who say that the whole world must measure everything the same way are unrealistic. As a pilot, I am comfortable dealing with knots and nautical miles. Physicians are right at home with minims and drams. Computer programmers think nothing of talking in nanoseconds. Astronomers are used to sidereal time, light years, parsecs and astronomical units. Does the world stop going around just because all these different specialties use different units of measurement? Hardly.

It is my conviction that all this change is a mistake, an unexcusable waste of money and effort, and a veritable blueprint for chaos. But if change we must, then let us be sure that we change for the *better*, not just change for the *different*.

Jack L. McVey
Technical writer
Wichita, Kan.

I can hardly quarrel with the concept of metric units over the long haul. I must accept

what the experts say—not changing would be more expensive than changing.

But after a lifetime in professional meteorology, I can find no justification for the change from °F to °C for temperature measurements by National Weather Service (NWS). I have yet to learn of a single area where Celsius is superior to Fahrenheit.

There are disadvantages. First, the Celsius degree is nearly twice as big as the Fahrenheit degree. Some years ago, NWS, deciding that reading temperatures to tenths of a degree was not justifiable, switched to whole-degree recordings. Now, with a degree twice as large, it would seem necessary to read temperatures to half degrees to retain the present level of precision. Second, with Celsius, below-zero readings will be much more frequent, leading to additional problems in encoding for teletypewriter transmission and to the use of the minus sign or the letter *B* in printing. Third, either thousands of expensive thermometers now in use by NWS will have to be scrapped or else conversions made at the time of reading, leading to one more source of possible error.

Leonard G. Pardue
Consulting meteorologist
Miami Springs, Fla.

What happens when the will of the people is allowed virtually full play in matters of measurement? The status-quo every time! The fact remains that men of vision and influence have the occasional duty to pull and lead the people, and that still applies today.

The metric changeover may be a hardship for some of our generation, just as \$ and ¢ were for our ancestors, but surely we in our turn can make just one sacrifice for the benefit of our grandchildren.

Paul Mohr
Winchester, Mass.

Discovery of Ariel and Umbriel

A couple of points may have been unclear from the correspondence (SN: 4/23/77, p. 259) on pre-1851 positionings of the major interior satellites of Uranus (Ariel and Umbriel):

1. Lassell (MON. NOT. ROY. ASTR. SOC. 3/12/1852) and Marsden agree that such were accurately made and published in 1848 or earlier.

2. Thus the sole remaining dispute is semantic. What constitutes "discovery" of a satellite: sighting and recording it as a satellite? Or determining its orbit? Or what? This very question is considered in detail in Rawlins, *ASTRONOMY & SPACE* 3:31-32. Note especially the Triton precedent.

Dennis Rawlins
San Diego, Calif.

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