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Letters

Pronouncing a particle

Now that it's official and physicists at CERN
definitely claim to have found the particle Z^0 ,
(SN: 6/18/83, p. 388) the question arises, "How
do you say it?"

Surely it's not "Z to the zero power," although
that's what it looks like. If the zero were level
with the bottom of the Z, like this: Z_0 , it would be
"Z sub zero."

I'm therefore tempted to read Z^0 as "Z super
zero."

But that's only my weak interaction. Am I cor-
rect?

Arthur J. Morgan
New York, N.Y.

It's "zed-zero." —Ed.

The speed of light

The introductory paragraphs to the article
"Tomorrow's Telephony: Light and Clear" (SN:
5/21/83, p. 330) seem to imply that light travels
faster through optical fibers than electricity
flows through copper wires.

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Cover: Computer graphic from radiation treatment program is a lateral
view of a cancerous eye. Green outlines the iris, yellow the lens. The
blue bundle is the optic nerve, orange the tumor. White circles are
metal rings attached as references. (Photo courtesy of Lawrence
Berkeley Laboratory)



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Since light and electricity are both elec-
tromagnetic wave phenomena, their wave ve-
locities are identical (in a vacuum). Both of
these forms of electromagnetic waves travel
through "waveguides," the optical fiber being a
waveguide for light energy and wires for electrical
energy. Any difference in velocity between
the two could be a function of the material
within the waveguide; however, over distances
of tens or hundreds of kilometers this difference
would not be appreciable....

Hans J. Togenes
West Richland, Wash.

More on rape season

I was disappointed to see a serious review of
pseudoscientific research in your generally
careful publication ("Rape season: Legacy of
our past?" SN: 7/23/83, p. 53).

This type of research (selective statistical
analysis; inappropriate controls) gives a bad
name to federally funded research as well as to
careful sociobiological research.

Crimes against persons increase as personal
interaction and availability increase (warm

weather). Homicide has no relationship as the
perpetrators are usually friends or family. Rob-
bery increases as weapon concealment be-
comes more practical (cold weather). These
trends have been known by criminologists and
the beat cop for many years.

Do you suppose that the change in the earth's
axis and gravitational pull of the sun has some
effects? How about increased volatility of
female hormones during the summer months? I
wonder if the reviewed research article is not
really a hoax.

Mark Fox
Temple Hills, Md.

*Corrections: In the cover photo accompanying
"Dioxin Digest" (SN: 9/13/83, p. 145), the aircraft
spraying Agent Orange were mistakenly
identified as fighters. They are C-123s, accom-
panied by an escort plane.*

*The article about the natural laser in the Mar-
tian atmosphere (SN: 9/17/83, p. 181) incorrectly
described a pair of mirrors as being 50 kilome-
ters in diameter. Their size should have been 50
meters.*

SEPTEMBER 24, 1983

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