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COVER: Glowing ionospheric "hole" resulted when chemical reactions with the exhaust of the rocket that launched the NOAA-C weather satellite on June 23, 1981, depleted the concentration of electrons and ions in the upper atmosphere. See p. 22. (Photo: J. Baumgardner, H. Spence, M. Mendillo)

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LETTERS

Leave the animals alone

Your article "Breeding New Life Into Endangered Species" (SN: 11/28/81, p. 347) begins with the sentence:

"It might be simpler, surer and less expensive to leave wild animals to carry on in their natural settings...."

That's quite correct. The entire story should have ended right there. We should leave wild animals alone and forget the zoos once and for all. They are man-made horrors that serve no purpose, educationally or otherwise.

Man travels on his merry way destroying the natural habitats of our wildlife, and then says we have to protect that wildlife by putting it in zoos.

No zoo can duplicate a natural environment no matter how much effort goes into trying. If we want to educate people on wild animals, there are plenty of films that can serve this purpose.

No one is educated by seeing a penned lion or cheetah pacing neurotically, or a bear constantly rubbing his face against iron bars. If we leave the animals and their habitats alone, Nature will see to it they multiply in the proper numbers. Zoos aren't the answer to preserving our wildlife. Man butting out of their business is.

*Alice Herrington
New York, N.Y.*

Hail ioneers

Thank you for sending me the interesting article "Something in the Air" (SN: 12/5/81, p. 364).

Linda Garmon did very well in covering this particular aspect of air ion research. There are a few points about which I would like to comment.

On page 365, at the very bottom of the middle column, the statement is made, "The serotonin imbalance has been implicated in various behavioral disorders such as hyperactivity and aggression. Krueger, Marian C. Diamond and colleagues found that high concentrations of positive ions raised the serotonin concentration in the blood of rats, whereas similar concentrations of negative ions lower it." Actually, in the November 7, 1980 SCIENCE article, we did not work with blood levels of serotonin. The rats in question were exposed to negative ions (not positive or negative air ions) and the levels of serotonin, cyclic AMP and cyclic GMP in the somatosensory cortex and in the occipital cortex of the brains were determined. The negative ions reduced serotonin levels. The blood work was first done by Krueger, Andriese and Kotaka (1966)....

One last point: Do negative air ion generators produce clean air? A rather uniform complaint about such generators is their tendency to develop a film of dirt on exposed surfaces. The exact location of the deposits depends upon the electromagnetic configuration of the enclosed space. At any rate, the film certainly is derived from particles suspended in the air.

We ioneers have been considered to be out of touch with reality for so long that it is pleasant to see our subject getting some serious attention.

*Albert Paul Krueger, M.D.
Berkeley, Calif.*

The Chandler Wobble

Thank you for sending me a copy of the October 24, 1981 issue of SCIENCE NEWS directing my attention to the article "Chandler Wobble" (p. 268). Aside from the first paragraph, I found it to be very well done.

Before I knew enough about Chandler myself, I also once referred to him as an "amateur." The facts show that this is a very misleading designation for the man, at least in the context in which the word is now used. Today, an amateur astronomer is one who does trivial astronomy in his spare time and with equipment that is not normally suitable for serious research. None of that is true of Seth Carlo Chandler. During a large fraction of his life, he was a peer of the best astronomers of his time, and he was considered as such by them. He won two Gold Medals still greatly coveted by professional astronomers, and he was for many years the editor of what was then their leading professional journal. He published over 200 professional-level scientific papers, many in collaboration with Harvard College Observatory. The only problem arises because, during his most fertile years, he had no need of a salaried astronomical appointment. Thus, he was indeed an amateur, but only in a definition of the word which is now obsolete. Every time that this inaccuracy is repeated, it does an injustice to the man and his work.

*J. Derral Mulholland
Austin, Tex.*

My attention has been drawn to the interesting article by Cheryl Simon about the Chandler Wobble. She refers to the main campaign of Project MERIT and then states that "the most accurate method wins." I would like to correct this misconception since it is most unlikely that the recommendations of this Working Group about the future international service will be of this character. There are other factors besides accuracy to be taken into account, and it is probable that we will recommend that the results from several techniques should be combined in such a way that we can obtain earth-rotation data of high quality at a reasonable cost.

*G. A. Wilkins
East Sussex, U.K.*

Heart drug approval

I found the article "Heart drug approved" (SN: 12/5/81, p. 359) to be particularly enlightening. It is very reassuring to know that the FDA rarely bases its drug approvals on foreign clinical trials. After all, isn't it common knowledge that the integrity of American scientists far exceeds that of our international counterparts?

*Aaron Wilson Hughey
Bowling Green, Ky.*

Your magazine is probably the finest of the significant science encapsulators, but please don't advertise or promote an individual product.

The beta blockers have been around since the mid-sixties and they *all*, not just timolol, reduce second heart attacks and deaths related to these.

*Tony Cohen, M.D.
Wayne, N.J.*

Address communications to Editor,
Science News, 1719 N Street, N.W.
Washington, D.C. 20036
Please limit letters to 250 words.