

latency for cancer to appear is typically longer than the latency experienced by these few patients?

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References and Notes

1. The antenna that radiates a car phone's energy is mounted outside the car, and for a bag phone it is usually on a table well away from the users head. Only the antenna for a hand-held phone exposes the head to significant radio frequency radiation.
2. J. E. Muscat *et al.*, *J. Am. Med. Assoc.* **284**, 3001 (2000).
3. P. D. Inskip *et al.*, *N. Engl. J. Med.* **344**, 79 (2001).
4. C. Johansen *et al.*, *J. Natl. Cancer Inst.* **93**, 203 (2001).

Response

FREY HIGHLIGHTS A CENTRAL CHALLENGE facing epidemiologists who study the effects of cell phone use. How can researchers measure the amount of radiation exposure each user receives? The degree of exposure varies with how many minutes the user spends on the phone, how many years they have been a subscriber, and whether they use a hands-free headset or a car phone that keeps the antenna at a distance.

As I noted in the article, critics of the epidemiologic studies have challenged the exposure estimates. In the Danish study by Johansen and colleagues, for example, all

cell phone users were described as "exposed" whether they used their phone only for emergencies or spoke for hours. The authors of these studies do, however, acknowledge these limitations, and most admit that definitive answers about the effects of cell phones are years away.

Notably, epidemiologists Kenneth Rothman and Nancy Dreyer had planned to overcome these difficulties by using subscriber records to measure the amount of time users spent on the phone. But because of the privacy lawsuit described in the article, the fate of their study remains uncertain.

MARK PARASCANDOLA

JGR Authors Set the Record Straight

THE EDITORS' CHOICE ITEM "CLIMATOLOGY: hotter than ever" (9 Nov., p. 1245) about our paper published in the *Journal of Geophysical Research* (1) contains three misstatements that we wish to clarify.

In the opening sentence, climate sensitivity is described as "a parameter used by climatologists to specify the increase in average global surface temperature in de-

grees Celsius as a consequence of doubling the concentration of atmospheric carbon dioxide." Instead, climate sensitivity is the change in average global near-surface temperature (ΔT , °C) for a prescribed radiative forcing (F , in units of watts per square meter), expressed as ΔT or $\lambda = \Delta T/F$ (2). It is practice to determine λ for general circulation models by performing a CO₂ doubling simulation, with the resulting temperature change denoted by ΔT_{2x} and $\lambda = \Delta T_{2x}/F_{2x}$. But climate sensitivity can also be determined for other forcings such as an increase in solar radiation. We have performed a suite of such simulations with our general circulation model for different radiative forcings and found that λ was virtually invariant (3).

Also in the first paragraph, it is stated that "The Intergovernmental Panel on Climate Change [IPCC] range of likely values for climate sensitivity is 1.4 to 5.8°C, although the full range varies from 0.1 to 10.0°C." These ranges are not for climate sensitivity, but for the temperature change in 2100 projected by the IPCC (4). Part of these ranges is due to the uncertainty in ΔT_{2x} , given by the IPCC as $1.5^\circ\text{C} \leq \Delta T_{2x} \leq 4.5^\circ\text{C}$ (4), and part due to the uncertainty in future emissions.

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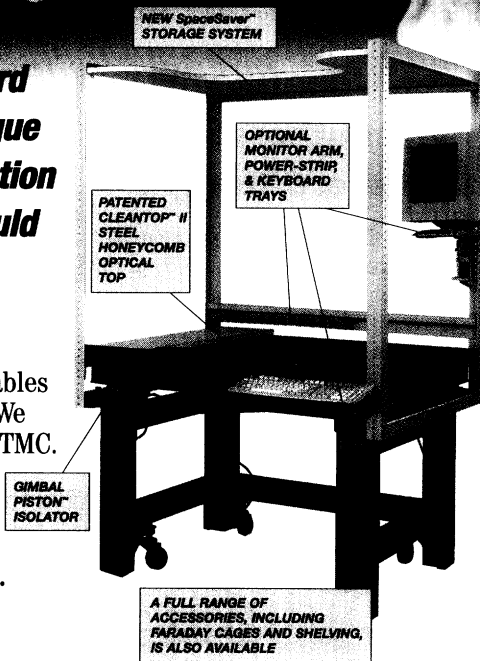
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SCIENCE'S COMPASS

And lastly, the second paragraph begins, "In order to construct a probabilistic estimate for climate sensitivity, Andronova and Schlesinger analyze 16 different radiative-forcing scenarios with a simple climate model using, in each case, a doubling of carbon dioxide, but with various combinations of additional factors such as tropospheric ozone, anthropogenic sulfate aerosol, the Sun, and volcanoes." We did not use a CO₂ doubling. Rather, we used the time history of greenhouse gas radiative forcing, both alone and together with time histories of radiative forcing for the additional factors above. We estimated ΔT_{2x} for each radiative forcing history.

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References and Notes

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2. M. E. Schlesinger, N. G. Andronova, in *Encyclopedia of Global Environmental Change* (Wiley, London, 2001), vol. 1, pp. 301-308.
3. M. E. Schlesinger et al., *Technol. Forecasting Soc. Change* **65**, 167 (2000).
4. J. T. Houghton et al., *Climate Change 2001: The Scientific Basis* (Cambridge Univ. Press, Cambridge, UK, 2001).

CORRECTIONS AND CLARIFICATIONS

LETTERS: "Did human hunting cause mass extinction?" letter by R. Slaughter and J. Skulan (16 Nov., p. 1459). On page 1461, the numbers -0.37 in the second equation and -0.2622 in the third equation should have been exponents, not subtracted numbers. The correct equations, respectively, are as follows, where r_m is a species-specific growth constant:

$$r_m = 4.4669 \times [\text{body mass, g}]^{-0.37}$$

$$r_m = 4.9 \times [\text{body mass, g}]^{-0.2622}$$

REPORTS: "Biogeography and ecological setting of Indian Ocean hydrothermal vents" by C. L. Van Dover et al. (26 Oct., p. 818). The affiliations for three authors were incorrectly indicated. T. L. Harmer and Z. P. McKiness are at the Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA 02138, USA, and C. Meredith is at the College of Oceanic and Atmospheric Sciences, Oregon State University, Corvallis, OR 97331, USA.

NETWATCH: "The human story" (12 Oct. p. 271). The skull photo was misidentified as *Australopithecus boisei* from Tanzania. The specimen is actually an *Australopithecus afarensis* skull from Ethiopia.