African Americans had significantly higher rates of infection with hepatitis B virus than did whites even after SES was controlled for with the best available measures (*1*). In Philadelphia, income level explained some, but not all, of the favorable reductions in the rate of increase of AIDS in white residents compared with that in nonwhite residents (*2*). Thus, even when good data on SES exist, SES as a risk factor may be an imperfect surrogate in a complex web of underlying causes that include cultural variations in behavior that are distinct from SES.

In practice, people want to know how HIV affects persons of their own race and ethnicity and respond positively to public health messages that are culturally appropriate and targeted to individuals with whom they can identify. It is difficult enough for social scientists to adequately measure SES; imagine the general public trying to decode an AIDS awareness poster featuring a person of low SES.

Improving the health of racial and ethnic minorities in the United States is a priority of the Public Health Service (*3*). Data on race and ethnicity can help target interventions and resources to those communities that are most in need (*4*). Minority communities are particularly hard hit by the AIDS epidemic, regardless of the underlying causes. It is hoped that greater recognition of this problem will help prevent further spread of HIV.

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5. I thank J. Karon, G. McQuillan, S. Melnick, and R. Hahn for helpful discussions.

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Climate Change Report

S. Fred Singer (Letters, 2 Feb., p. 581) refers to the "summary for policy-makers" (SPM) ratified by the Intergovernmental Panel on Climate Change (IPCC) at its meeting in Madrid in November 1995. We are responding as a subset of the lead authors of the full IPCC report and participants at the Madrid meeting.

Singer writes that there has been no global warming trend "in the last 50 years." This is not supported by the data; the trend from 1946 to 1995 is 0.3°C. As shown in chapter 8 of the full report (figure 8.4), there is no inconsistency between the observed temperature record and model simulations.

Singer notes differences between satellite estimates of lower tropospheric temperatures (derived from microwave sounding unit data) and surface temperatures from 1979 to the present. As explained in chapters 3 and 8 of the full report, there are good physical reasons to expect differences between these two climate indicators. They differ, but they are not inconsistent.

Singer writes that climate models lack validation. Chapter 5 in the 1995 report deals with the validation issue. Current general circulation models (GCMs) have well-known and well-documented weaknesses, but they still perform remarkably well in simulating important features of current climate conditions.

In noting that global mean temperature projections made in the latest assessment are lower than those given in 1992, Singer says that this fact and the reasons for it are not mentioned in the SPM. This is incor-

rect. There are a number of reasons for the differences, which are given in the SPM and in the relevant chapters of the full report.

Singer notes that potential aerosol influences on climate were hypothesized some 30 years ago. Current literature (*1*) recognizes these early empirical works. What has changed since 1990 (*2*) has been our ability to quantify the influences of specific, chemically defined types of aerosols and include them as independently estimated forcings. The IPCC report (chapters 2, 6, and 7) considers both direct and indirect effects of anthropogenic sulfate and carbonaceous aerosols and provides estimates of uncertainties. Further, it documents current increases in world sulfur emissions (mainly from Asia), contrary to Singer's implication that pollution controls by major emitting nations might have caused global decreases.

In his statement about the detection issue, Singer says that the pattern recognition work described in chapter 8 of the full report, which is the main basis for the (still cautious) statement in the SPM that "the balance of evidence suggests that there has been a discernible human influence on global climate," is not in the peer-reviewed literature. He also says that lack of peer review would violate a major rule of IPCC. He is wrong on both counts.

The criterion for inclusion of material in the IPCC reports is not that the material should be in the peer-reviewed literature, but that it should be accessible to reviewers of IPCC drafts. Thus, published reports, book chapters, and manuscripts submitted for publication or in press, were acceptable material. The reason for this is partly to ensure that the report, when published, would be up-to-date and truly reflect the state of the art. In any event, more than 95% of the work cited in chapter 8 *is* in the peer-reviewed literature.

The specific work Singer refers to, on the increasing correlation between the expected greenhouse-aerosol pattern and observed temperature changes, *is* in the peer-reviewed literature (*3*, *4*). Furthermore, the former work (*2*) has been available since January 1995 (*5*). Other work on this topic that is cited in chapter 8 is also readily available.

In his final point, Singer refers to the SPM as saying that global warming is "the greatest global challenge facing mankind." We do not know the origin of this statement—it does not appear in any of the IPCC documents. Further, it is the sort of extreme statement that most involved with the IPCC would not support.

Our plea to Singer and others who comment on IPCC reports is that they show the same concern for accuracy and balance as do those scientists who worked so hard to prepare the IPCC reports and who assisted in the review and approval process.

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My letter of 2 February mentioned an "authoritative U.S. government statement" that quotes a global warming figure as low as 0.5°C by 2100—only half of the IPCC's lowest prediction in 1995 and one-third of

its lowest value in 1992. That statement, which was not referenced, can be found in the "Combined DOC/NOAA, DOE, EPA, NASA and NSF comments on the April 1995 draft GAO report on factors limiting the credibility of the GCMs" [Enclosure, letter of 22 May 1995 from Robert W. Corell, Assistant Director for Geosciences (National Science Foundation) and Chair, Subcommittee on Global Change Research] (GAO/RCED-95-164, U.S. General Accounting Office, Washington, D.C., July 1995), p. 30.

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Space Research

I must take issue with the article "Particle physicists take to orbit" by Gary Taubes (Research News, 12 Jan., p. 142). Taubes discusses two new initiatives in space-borne astrophysics, the "GLAST" gamma-ray telescope and the AMS (Alpha Magnetic Spectrometer) instrument, to search for cosmic ray antimatter. The fact that these two proposed missions involve collaborations under leadership by high energy physics groups is taken as a sign of a different culture now entering space astronomy. It is implied that the "expertise, state-of-the-art technology, and culture of large collaborative efforts" of high energy physicists is reinvigorating the field, making it possible "to build satellite experiments more economically than can be done by the traditional NASA method."

There has always been a healthy interaction of "give-and-take" between high energy astrophysics and particle physics. The recent convergence between the two communities is laudable for scientific reasons, but it should be viewed neither as a revolution nor as a one-way street.

Any instrument that takes decades to develop will use technology that may be partially outdated when it is launched. Time durations of this order are not specific to a particular science culture or technology; they are caused by political and funding fluctuations outside the control of the scientific community.

Yes, NASA telescopes have often been constructed by single contractors in the aerospace industry, and the price tags have been high. In some cases, such as the Hubble Space Telescope, it was probably the only way to proceed. However, other instruments have been efficiently and economically assembled under direct scientist control, for instance in university laboratories. The problem now is that NASA (along with other agencies) is continually reducing the support available for technical infrastructure at university laboratories (necessary for the development of complex instrumentation). As a result, only a few institutions are left that would be capable of handling a state-of-the-art space mission. As the universities lose this ability, the opportunities for hands-on training of students and young scientists and engineers in space research disappear. Also, our future in space is endangered.

The AMS project circumvents this problem altogether: it can promise relatively low cost to the U.S. taxpayer by moving most of the hardware activities overseas and by lowering personnel expenses. Thus, on the surface, NASA may have a "cheap" instrument to be put on the space station, but at the price of largely excluding the U.S. science community from hands-on involvement. One hopes this will not become the standard of how the U.S. space science program is to be pursued in the future.

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Corrections and Clarifications

The 1 March ScienceScope item "Fusion backers plead for funds" (p. 1221) incorrectly cited the current Department of Energy fusion budget. The 1996 budget is $244 million; the 1995 budget was $366 million.

In the Table of Contents for the issue of 9 February (pp. 734 and 735), the captions for the illustrations at the lower left and the lower right were inadvertently interchanged. "Stretching DNA to the limit" is shown at the lower left, and "DNA bending and transcription" is shown at the lower right.

In the Gordon Research Conferences announcements for Summer 1996 (9 Feb., p. 826), the co-chair of the Lasers in Medicine and Biology session (p. 835), Alfred Vogel, was inadvertently omitted.

Letters to the Editor

Letters may be submitted by e-mail (at science_letters@aaas.org), fax (202-289-7562), or regular mail (*Science*, 1333 H Street, NW, Washington, DC 20005, USA). Letters are not routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for reasons of clarity or space. Letter writers are not consulted before publication.