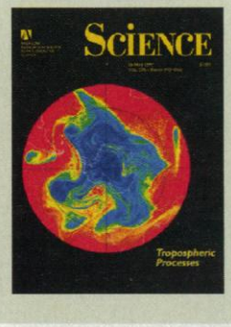
LETTERS

Longitude and longevity

In the wake of a special section about "tropospheric processes," readers discuss the influences of natural events and human activity. Researchers produce data that might "decrease the anxiety" of fathers who sire children before the age of 45. Biologists review the status of "a national biodiversity inventory" in Costa Rica. Scientists revisit the challenge of conducting "expensive, long-term" therapeutic drug research and development. And "the reality" of science administration in Britain is explicated.



Greenhouse Effect—Clouds and Sunshine

In the article "Greenhouse forecasting still cloudy" (News, Tropospheric Processes, 16 May, p. 1040), Richard A. Kerr discusses the uncertainties related to anthropogenic increase of the greenhouse effect interpreted by some of the leading researchers from dominating climate modeling centers in the United States and Europe.

Kerr's news article is succeeded by seven research review articles on atmospheric processes related to the climate issue. None of these contributions refers to the striking correlation between global temperature and solar activity over the last 130 years that was presented previously by E. Friis-Christensen and K. Lassen (Reports, 1 Nov. 1991, p. 698) or to the succeeding paper that extended this relationship several hundred years back in time to the "Little Ice Age" (*1*).

A recent study "Variation of cosmic ray flux and global cloud coverage: A missing link in solar-climate relationships" (*2*) suggests that a physical relation might explain the high correlation between solar activity and global climate. The review article by M. B. Baker "Cloud microphysics and climate" (Articles, Tropospheric Processes, 16 May, p. 1072) demonstrates the high sensitivity of the global radiation balance as a function of cloud parameterization, although Baker does not fully discuss cloud microphysics relations with cosmic radiation and ionization.

Improved understanding of the anthropogenic greenhouse effect might thus be obtained by better understanding of the natural climate variations related to solar variation, its influence on cosmic rays, and the possible change in cloud cover.

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References

1. K. Lassen and E. Friis-Christensen, *J. Atm. Terr. Phys.* **59** (no. 8), 835 (1995).
2. H. Svensmark and E. Friis-Christensen, *ibid.* **59** (no. 11), 1225 (1997).

Reading the meeting brief "Contrails may alter climate" by Richard A. Kerr (Research News, 13 June, p. 1649), I was reminded of a personal observation of contrail persistence. Growing up in Germany in the spring of 1945, I watched the daily procession of U.S. bomber formations proceeding to and from their targets. Frequently, these formations would leave massive contrails that sometimes formed into persistent clouds covering a good fraction of the sky. To be sure, we are talking here about many planes—I estimate that at times more than 300 bombers might have been in my view at a time, flying at altitudes between 6000 and 9000 meters. The clouds so formed looked like thick cirrus.

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When Fatherhood Should Stop?

Constance Holden's piece "The perils of late-age procreation" (Random Samples, 6 June, p. 1503), about our recent finding that daughters of older fathers live shorter lives, has stimulated us to return to this problem and to reanalyze the data for different ranges of paternal ages at reproduction.