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Cover: This oil shale processing pilot plant at Anvil Points, Colo., is one of the few bright spots in a gloomy oil shale development picture. In the process shown, crushed shale, strongly heated as it falls through a towering "oven," or retort, releases a thick oil that can be refined into liquid fuels. (Photo: I. Peterson)

365 Wine-Tasting in Vitro

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# Letters

# Nuclear headline

You report that 244 leading Soviet scientists, including a Nobel Prize winner for laser physics, have issued an appeal, similar to that of many of our own distinguished scientists, against President Reagan's proposal to build antiballistic weapons in space (SN: 9/17/83, p. 187). Furthermore, the Soviets claim that such a weapon as Reagan proposes "will invariably develop into the appearance of another element which would bolster the American 'first strike' potential." Since the U.S. has never renounced a first strike, and since some of our Administration people speak of "a prolonged nuclear war," a notion that defies all that we know of the consequences of a nuclear war, I cannot understand how you can head the article ambiguously, thus: "Plea for morality or just propaganda?" In my view, you are not justified in adding to the frigidity of the already freezing Cold War.

Leonard T. Boyer Flushing, N.Y.

For more on first strikes, see p. 361

#### Armageddon in print

Your article "Beyond Armageddon" (SN: 11/

12/83, p. 314) by Janet Raloff mentioned the well known "TTAPS" paper by Richard Turco, Brain Toon, Thomas Ackerman, James Pollack and Carl Sagan concerning the climactic aftermath of nuclear war. The title of this paper was not mentioned. I am aware that it is entitled "Global Atmospheric Consequences of Nuclear War," but do not know where it is published. It is an important scientific contribution that will influence political views concerning development and deployment of nuclear weapons.

Loren Thompson Michigan State University East Lansing, Mich.

Ed.'s note: Both the TTAPS paper and the biological-effects paper (reported on by Paul Ehrlich at the Washington, D.C., conference) are tentatively scheduled to be published in the Dec. 9 issue of Science.

## Hackers vindicated

While I suspect that it is too late to change the media's definition of the term "hacker" (SN: 11/5/83, p. 294), I will make one attempt before giving in. In the computer science community, the word "hacker" is used in several different ways, but as far as I know it is not generally used to mean "computer vandal" or "computer juvenile delinquent." A more accurate definition of hacker is "someone who designs and builds computer programs and systems mainly for the pleasure and challenge of doing so. Hackers are often highly motivated, highly skilled and knowledgeable members of corporations, universities and research institutions. They make major contributions to the computer environments used by many non-hacking computer users.

Occasionally one hears the term "hacker' used in a slightly pejorative sense. Since hacking is often an activity that is unsponsored (or under-sponsored) by the institution at which the hacker hacks, the charge "stop hacking" means "stop fooling around and do what you're supposed to be doing.'

Nathaniel Mishkin Yale Univ. New Haven, Conn.

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