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Letters

Heaven sent

The article about radiation from Cygnus X-3 being detected by underground proton-decay experiments is fascinating ("Cyg X-3: Photinos, quark nuggets?" SN: 10/12/85, p. 231). Unfortunately, the article does not answer one of the most fascinating questions: How were these underground events connected with the Cygnus X-3?

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Monaca, Pa.

By the direction from which they came.

—D. E. Thomsen

On compliance and sharing

Regarding "Verifying the Threshold Test Ban" (SN: 10/26/85, p. 268), it is clear that Stefi Weisburd has done considerable homework,

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Cover: Steven Vogt is the leader of a small group of astrophysicists at the University of California at Santa Cruz. To test a computer program for determining the locations of spots on stars using data taken from the spectra of the stars' light, two of his associates, Donald Penrod and Artie Hatzes, wrote Vogt's name on a hypothetical star, calculated the spectrum that should give, and put it through the program. They got back the result on page 364. Starspots are part of the new excitement in the study of cool stars. (Illustration: Lick Obs./UC Santa Cruz)



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but I believe that a couple of points deserve amplification.

First, while bias in yield estimation between the U.S. and USSR test areas is an important consideration, it is only part of the problem. Making yet another bias adjustment in favor of the Soviets will in no way alter the facts that (a) the issue of past Soviet compliance or non-compliance is and will remain unresolved and unresolvable, and (b) future enforcement of Soviet compliance at yield levels that preclude violations of considerable military significance will continue to be impossible so long as seismic methods alone are used for this purpose.

Recent advances in surface-wave interpretation in my view only add to the evidence that no single bias estimate can be adduced that applies to all Soviet tests or even all tests at a particular site. They also add in some cases to the likelihood that violations have occurred, even as they reduce that likelihood in other cases.

I fully agree with Weisburd's conclusion that the problem is political, but I would add to her final questions ("How much uncertainty are we willing to live with? How much information are we willing to share in order to minimize those uncertainties?") another pair. How well must we enforce compliance in order to avoid a significant military disadvantage? And how much information are the Soviets willing to share? On the first point, opinions clearly may differ. On the second, the record is not encouraging.

Donald R. Westervelt
Los Alamos, N.M.

Correction: In "Asteroid origin of the Everglades?" (SN: 11/9/85, p. 294) the Holocene was incorrectly described as the epoch of the last 1 million years. The Holocene, in fact, spans only the last 10,000 years.

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