LETTERS

Observations

NELSON/JASPER RIDGE BIOLOGICAL PRESERVE

A reader asks why studying "the demise" of a butterfly population was more important than intervening to "try to save" it (right, *Euphydryas editha bayensis*). Physicists present their case that a collision event warrants "further investigation." "Fairer evaluations for young scientists" might result, it is said, if scientific papers described "who was responsible for what." And asbestos removal is advocated for the Jussieu campus of the Université de Paris.

Butterfly Watching

With respect to the Research News article "Much-studied butterfly winks out on Stanford preserve" by Ellen McGarrahan (24 Jan., p. 479) about the loss of the Jasper Ridge checkerspot butterfly, it is not clear why watching the demise of this population (about a dozen individuals in a preserve in California) was an important research opportunity that precluded intervening to try to save the butterflies. Nor is it clear what data were garnered, what specific hypotheses were under examination, and what possibilities were ruled out by this "enlightening" study of extinction.

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APEX: An Unexplained Event

In Gary Taubes' article "The one that got away?" (News & Comment, 10 Jan., p. 148), we are portrayed as being at odds with "virtually every nuclear physicist who has worked on the [APEX] experiments." While that may be true, the article could be interpreted as casting doubt on our scientific judgment and implying that somehow our support was "enlisted" by Jack Greenberg for other-than-scientific reasons. Thus, we outline here the evidence for structure in the electron positron sum-energy spectrum from the APEX experiment that Greenberg has shown us which makes us believe further investigation is warranted.

The top drawing in the accompanying figure shows the sum-energy spectrum as analyzed by Greenberg and his colleague Guangsheng Xu, overlayed on a background spectrum. The bottom spectrum is the background alone. The peaks between 680 and 800 thousand electron volts (keV) are in the same sum-energy region as seen in the EPOS I experiment (see the EPOS, 1990 spectrum from Taubes' article, p. 149).

We ask three questions about this structure and these peaks. First, is the deviation from the background statistically significant? By standard statistical analysis, the probability that a statistical fluctuation from the background of this magnitude would occur in the sum-energy region previously seen in the EPOS I experiment is 3.5×10^{-5}. The probability that such a deviation would occur by chance at any value of sum-energy in the spectrum is 3×10^{-3}. Thus, we consider