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LETTERS

B Factory Proposals

I write in response to the article by Faye Flam, "Cornell leads battle of the B factories" (News, 27 Aug., p. 1111).

There are five principal concerns about the proposal by Cornell University. First, synchrotron radiation heating of the vacuum chamber is far beyond anything that has been allowed before in any storage ring anywhere in the world. Second, the superconducting cavities proposed by Cornell are specified to operate at twice the accelerating gradient of any superconducting cavity that has ever been used in an accelerator. Third, the so-called "crab-crossing" technique, which was proposed by Brookhaven and the Stanford Linear Accelerator (SLAC) physicists for use in future linear colliders, has never been tried. Fourth, the manpower resources of Cornell are marginal for the task. Fifth, there is concern about the schedule.

Cornell has estimated that it can construct a B factory for significantly less than can SLAC. However, this estimate may not accurately reflect the true costs associated with the program. In comparing costs, government officials should take into account the total cost of each proposal, including the commissioning and ongoing operational costs associated with bringing the machine up to the performance standards necessary to conduct the scientific work for which it is designed. In determining the site for the B factory, officials should also take into account the long-term interests of the U.S. high energy program. SLAC represents a billion-dollar federal investment that plays, and can continue to play, a central role in development of high energy electron accelerators. It seems to me unwise to create a new national lab, financed by the Department of Energy, that would require duplicating facilities already in place at SLAC, while simultaneously phasing down the nation's premiere electron physics lab.

Finally, I disagree with the remark that SLAC "has been teetering near extinction since its last big project, the Stanford Linear Collider, proved a disappointment. . . ." The linear collider has surpassed all the performance goals set for it for this year; the data taken up to now on the linear collider will produce, among other things, a measurement of the Weinberg angle that can be surpassed only by combining 24 separate measurements from CERN; the fixed-target program in 2 months of operation has produced the best measurement of the neutron spin-structure function that exists in the world; and recent proposals for use of our facilities were sufficient in number to commit all of our available running time through 1999, if I had allowed the program committee to commit us so far in advance. This is hardly a program "teetering near extinction."

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Biology at Caltech

Robert Olby, in his review (18 June, p. 1825) of Lily E. Kay's book *The Molecular Vision of Life* (Oxford University Press, New York, 1993), writes

> In [the] context of the industrialization and eugenic "cleansing" of the western seaboard Caltech [the California Institute of Technology] became the spearhead of the movement in the West for progress by technology and science.

How fashionable. How politically correct. And what a skewed view of the locus of some of the major scientific advances of our century. Kay's book is a distortion, and Olby's review an echo thereof. According to Olby,

> Kay comes to the conclusion that the existence of these long-term goals [to further the "fundamental aim of social control"] in the Rockefeller Foundation's program did not amount to a Machiavellian subversion and co-optation of academia. Rather, cultural hegemony was achieved "through the explicit and tacit constitutive processes of consensus formation."

That is, co-optation was not necessary. They all shared the same goals. How neat.

The essential fallacy of the book and the review is purporting to divine what was in the minds and psyches of Caltech scientists and what motivations underlay their research and guided their choices at three to six decades' remove. This is social pseudoscience.

To illuminate this fallacy, let us apply the same technique to the minds of Kay and Olby in 1993. What motivates their choice of subject matter and perspective? Might we suppose that these authors live in a dark fear that the social and cultural processes they study minutely are in fact but marginal factors in the human drama—that the (so far) hidden internal processes, the (dare we say it?) genetic factors innate within each human being are much more determinative of their