



Fermilab



February 9, 2005

Prof. Fred Gilman
Chair of HEPAP
Dept. of Physics
Carnegie Mellon University
Pittsburgh, PA 15213

Dear Fred

We write to you to inform you of some concerns we have about process in the Office of Science and the Dept. of Energy in general that have come to light with the cancellation of BTeV.

The BTeV project was not included in the FY 2006 President's Budget with the justification that "The engineering design of the BTeV ("B Physics at the Tevatron") experiment, which was scheduled to begin in FY 2005 as a new Major Item of Equipment, will be terminated by the end of FY 2005. This is also consistent with the guidance of HEPAP, which rated BTeV as of lesser scientific potential than other projects, although still important scientifically; and P5, which supported BTeV but only if it could be completed by 2010, which is not feasible given schedule and funding constraints."

This justification is at best a clever twisting of the facts. BTeV passed its baseline CD2/3a review in December with flying colors (see the directors comments at http://www.fnal.gov/pub/today/archive_2004/today04-12-21.html .) In fact what it says is that we choose to give you too little money to meet your schedule and therefore terminate you because you can't meet your schedule, a rather circular argument.

The Office of Science did not discuss the budget that was presented in enough detail with the lab or BTeV to see what could be done in the current budget climate to get the project done. In fact, Fermilab believes that there is sufficient money in their FY 2006 budget to get BTeV done on time but this was not discussed with the people who know this project best, namely the BTeV Project Team. Furthermore, the DOE chose to allocate more funds to other projects contributing to the strangulation of BTeV.

That the Linear Collider is a long term higher priority than BTeV is the only logical item that the justification quoted above can refer too. However, BTeV is 50-100 times smaller project than the LC and it is not reasonable to compare these two directly. What is clear is that the same HEPAP subpanel that set the long term priorities also called for the P5 panel to set up to establish the priorities for the short term and BTeV was the only project that P5 recommended to move forward. Even after BTeV passed all the panels including P5 twice, once after its CD1 review, it was terminated without any further review by HEPAP, without discussion with Fermilab or the project.

It needs to be pointed out that BTeV was not merely a "paper exercise." We estimate that 500 PERSON YEARS of effort have gone into the scientific conceptual design of BTeV, the design of all of the apparatus, the testing in beams of most of the major components, the writing of a great deal of software to simulate and analyze the results of the tests and how the full detector will perform and last but surely not least a full Work Breakdown Structure that contained 18,000 items all with budgetary quotes and/or labor cost estimates and integrated into a full schedule that was resource loaded.

The BTeV Collaboration was informed of its termination by Secretary Bodman's press conference. There was no advanced warning. The DOE apparently has little concern for the personal feelings, careers, or plans of its stakeholders. This rather brutal approach can only turn people off from doing science and trying to think up new and innovative experiments and facilities.

Little if no thought has apparently been given to the effects of the termination of BTeV on (a) the Universities that have put so much into BTeV. (Recall that BTeV had obtained 9.5 M\$ of forward funding from the Universities.) Effects on University infrastructure and education of graduate and undergraduate students have not been ascertained. (b) The effect on International Collaborators and the US reputation in such endeavors has not been evaluated. Our four Italian groups had obtained INFN funding, about ~7.5M\$ (equivalent). The future plans of our Italian colleagues have been destroyed and their careers negatively affected. We doubt that they will work in the U. S. any more even though they have been working at Fermilab for the last 20 years. Our Russian and Chinese collaborators have also experienced similar effects. The Russian group has also been working at Fermilab for several decades and had obtained funding from Russia to support their participation in BTeV. They have expressed to us their disgust with our process and it will have serious negative effect in promoting any international collaborative effort in the U. S.

Furthermore, we believe that the future of experimental accelerator based high energy physics in the U.S. is now seriously at risk. BaBar is scheduled to end in 2008 or before, CDF and D0 in 2009. MINOS will have taken data for 4 years by then and will be close to ending as well. The LC will not be ready for a construction "start" on this time scale, if ever, let alone be ready for operations. Furthermore, it might not be in the US. We do not believe that the process leading to this budget has considered the serious detrimental effects on our field that the cancellation of BTeV will have beyond the obvious loss of the science that BTeV would provide since BTeV has a much broader physics reach than the competing LHCb experiment as documented by several Fermilab PAC review committees as well as P5.

To summarize, we believe the process in the DOE to be seriously broken. We believe that BTeV was not treated with any degree of fairness. We were treated brutally with out regard to the consequences on the People or Institutions in the Collaboration and the Project. We intend to make our opinions known. Please communicate this to HEPAP.

For the BTeV Collaboration:

Sincerely,

Joel Butler
Ex-BTeV Project Director

Sincerely,

Sheldon Stone
Ex-BTeV Spokesperson