

Summary of what I said in the All D0 Meeting last Friday (Sept. 5, 2003 9:30 a.m.)
following the Director's explanation of his decision.

I will try to be as true as I can recall to my presentation - *but I will also add post facto commentary in italics*. Items that were written in my handwritten transparencies are in upright Roman font; *items that I touched upon in words are in Courier font*.

We are faced with an unprecedented 'decision', and an unprecedented process thus we the 'decision' needs to be scrutinized. We need to ask if it is a flawed process and if it a flawed 'decision'.

Items to consider:

- We are told the main reason is a 6 M\$ shortfall. Is this serious, especially in the context of a 250 M\$ yearly budget?
- Another reason is that manpower will be freed to redirect to the Accelerator effort. Who is that? Most of the people 'freed' are not suitable to that task.
- Was it a complete decision? The phrase "We have not had the chance to review the newly proposed schedule in the way that would be needed to build it into the project" that appears in the document speaks volumes.
- Was it impartial or transparent? I do not know. In any case the statement "after consulting ..." is somewhat misleading. Through the grapevine I have learned that the Accelerator Division, the Research Division, and the Management Team of the Director's Office (2nd floor) all argued strongly for the upgrades. An ad-hoc committee from the Board of Overseers argued for at least the D0 upgrade. Even the PAC, which is not a totally independent body since it is appointed by the Director, answering to a set of questions whose thinly veiled thrust was "Tell me how to cancel the upgrades" rejected the idea by postponing it and even making the case that the D0 upgrade is warranted.
- Was it justified on the "physics"? Not so in the case of D0 at least. The D0 Upgrade is not luminosity driven; it is driven by the need for a better detector. Higgs hunting is statistics limited (luminosity), systematic precision physics are limited by detector performance. Our detector is not very robust, thanks to a very substandard idiosyncratic and prone to failure SVX2 chip. It will die not due to radiation damage, but due to electronics failures. The case for the rest of the Upgrade, without the Silicon and with due deference to my Trigger/Computing Upgrade colleagues, is not very strong. **Silicon was the Upgrade!** Also our installation can be accommodated in a two to three month shutdown, not a six-month break!

So why this? Especially since it is almost an obituary notice for the collider programme?

What are the implications to our lab and to morale? Is BTeV our only future?

I believe that BTeV is a very vulnerable experiment. It does compete with LHC turn on (since the CDF/D0 will run till then, and parasitic commissioning is a day dream for such a complicated detector), it comes on late, and it is very costly both in terms of construction (125 M\$) and more importantly in terms of operation (since it will have to justify the incremental cost of running the Tevatron which is somewhere in the 25+M\$ per year).

From all the people I talked to that attended the previous discussion with the Director held at 8:30 at SiDet I heard that BTeV figured very prominently in the explanation given there and, in contrast, was never mentioned in the D0 presentation. They also got the impression that it went beyond the point of just giving people a reason to expect a future but was an outright endorsement of BTeV.

Or is it an act of one falling on one's own sword? Is it a reply to Robin Staffin's statement: "You have a year of grace to get your act together..." Or what?

What is the subtext of this decision? !!!! There seems to be one. If no reasonable answer is given to this there is no credibility to this process. If it is a DOE or an external dictum then we have to be told so!

For us to accept such a dubious call we have to be assured that all steps were taken to avoid such a debacle. Can we say that? I cannot see how we can say that at all! What can we do? We were never mobilized! Has inventive financing be tried? Has political pressure been considered? I believe the answer to all of this is no.

My recommendation to the collaboration: Pull a CDF-like stunt, i.e. ignore the decision pending a reevaluation and keep on trucking.

At SLAC more drastic measures to curtail the budget shortfall were taken (week long furlough). What are the steps taken here – rather timid! I am personally willing to contribute my 21 vacation days and up to \$15000 towards defraying the 6M\$ shortfall. We should also apply political and public relations pressure.

We are also seeing a problematic Lab administration. Until now we have had sins of omission i.e. an "absentee management" style (I have only seen you twice at D0, you never discuss things, you never 'walk' the corridors!), a lack of oversight, and an inability to accept responsibility. We now see sins of commission, i.e. the deleting of ~~the only~~ one of the two vital parts of the programme (collider and neutrino experiment, *I should have said three and included also the kaon programme*).

We are also told about Long Term Planning – there was a presentation yesterday. Is this a joke? Obviously this remark of mine is a flippant remark – but it serves to underline a

major wake-up call that this 'decision' hides. This Lab will close and we are on the downward path – this long path of accelerator physics (pioneered by Lawrence, Alvarez, Panofsky, the BNL team, RR Wilson, Richter, ...) is coming to an end, at least in the US. The alternative of Cosmic/Astro-physics is not a panacea. These experiments and observations are becoming harder and harder and are sometimes limited in scope. It is a truth that if we had only cosmic rays we would still be arguing about the existence of charmed particles.

At this point I allowed a joke - a flippant moment if you wish. I said that by asking around I had identified a senior colleague that would turn off the lights at the end ... so we do have a local contingency plan!

I am only a grunt here, a working physicist, and I feel that you have completely failed me. Instead you working with us we find ourselves working against you.

And I ended by bringing up an e-mail from a very active foreign graduate student:

“even though
i don't think we will get the run2b silicon back, the thing i hate with
the fermilab management is that they don't fight for anything. i don't
want us to make the same mistake.

try not to loose your job!! ”

I added the comment: I expect to lose my job – it is not supposed to be a sinecure.

Petros Rapidis
Scientist (*at least for now*), Fermilab

At the end there was significant applause.

The Director replied by not addressing the issue of the flawed decision (at least as far as the D0 Upgrade is concerned) but by defending his record to date.

More recent developments: We are encouraged by the second floor to submit a proposal for a Layer 0 only Silicon Upgrade. This is a very weird path; it involves significant reengineering, a time penalty, a high risk, and a lot of work. It also will cost at least 1M\$ (to be compared with the 'savings' of 3M\$ for the cancellation of the D0 Upgrade). It also involves the same installation/commissioning penalties. In a nutshell, it is the same amount of work for a much smaller outcome. To quote a much more senior colleague in the Upgrade effort, it is a 'bizarre' choice. I couldn't have said it better.

I still think we should ignore this 'decision' and ask for reconsideration.
