

10-2-06 ART meeting  
Notes by P. Grannis, edits by G. Dugan

Bob – why is there any change in ilc allocations depending on whether or not we get the srf line?

Gerry – even at the lower level, we expect some infrastructure will need to be done. So if we do get the srf line, then can relieve other ilc stuff.

Bob has major difficulties with the approach; we should be identifying milestones and focusing on them. E.g. why spend on electron sources in next few years if there us a financial crunch?

Tor: this is why we asked for a 50% estimate, with an additional 150%. Lets talk at Fermilab

Satoshi: In some areas where we have unique expertise, we have to retain basic competence.

Gerry: also IR magnets.

The hardest thing here is making the initial stab at allocations. We will have to iterate several times for sure. We have limited resources so we do need to focus on the key areas.

Bob: can top down management work? If we believe the technology and the costs are under control, then its one thing. But if there are perceived problems with cavities, costs, then the situation is different.

Gerry: you're right. We need lots of effort on S0—S2. But for this planning exercise, we are taking the optimistic view that the cost estimate we have in a few months will enable us to continue.

Shekhar: In fy07, the top priority is S0, with some small progress toward S1. There is nothing in fy07 for S2. That will have implications for fy08. The Fermilab estimate for fy08 is larger than the guidance, considering the limited fy07 funding.

Tor: we have to balance; no doubt Fnal feels that there is not enough for SCRF. We may well have to advocate shifting the schedule. We are actually asking for a ton of money – more very tough to get more. The schedule may have to shift.

Bob: We will get killed if we don't make demonstration of the key technology. We have to give realistic schedule expectation to the funding agencies.

Paul: the schedule is the elastic variable here.

Gerry: the international partners' plans are another major unknown. We hope that we can adapt with better info from the GDE on other regional plans, to come early next year.

Bob: Japan is spending only 10M in FY06 and 07. Paul: this is not true.

Shekhar: The main linac plan is the most costly. The scope was projected at SLAC, and I got some comments. We propose in the Oct FNAL meeting to review the scope, understand the resources for that plan, and then decide what to do with the schedule timeline and scope. Recent TTC response was in the direction that perhaps we are pressing the schedule too hard, but they probably did not understand the details very well.

Gerry: fine, but make the plan meet the guidance as part of this. Try to vary the expenditure in a quasi smooth fashion, and try to address the guidelines. We do expect to get somewhat different approaches from different WBS areas.

Shekhar: The easiest path is to convert the plan reported at SLAC to resources. It won't fit, then we'll have to descope and stretch the timeline.

Bob: how does distribution assume industrialization. Gerry: yes, industrialization is included here. Regional interest is included. The regional interest panel (through Bob and Ewan) should work to ensure the needs are in here.

Ewan: it will be an iterative process. Gerry: but the conventional and civil infrastructure is perhaps well defined.

Satoshi: other regional interest is preserving regional capabilities; it needs flagging. IR magnets, L band klystrons. Tor/Ewan: we need to flag regional interest in appropriate areas, as in FY07.

Bob: a crisis is approaching. We need to develop cavity vendors. After 08, EU will be saturated by XFEL needs, and only with Asia and US will ILC get its needs met. Also issues with klystrons and electropolishing. It won't help with fy08 money if don't do some of the required work in fy07.

AES is making cavities but we don't know yet if they are fully qualified. Accel has low yield for XFEL cavities. So we have to spend enough in fy07 on cavities to capitalize in fy08. If not, progress will be disastrously slower. We won't have the key technology in hand to proceed with the other infrastructure.

In Japan, cavities are still a cottage industry. 6 cavities now, ranging around 20 MV/m. Not sure limitations are due to processing or fabrication, but low gradient quench seems to implicate fabrication.

Kwan-Je: Has the range for estimate relative to the budget targets changed? Gerry: yes, we decided last Wednesday to revise the range to 50% to 150%.

Bob: The higher budget has global systems going up; why? Gerry: need for controls and instrumentation items for vertical, horizontal, cryomodule test facilities.

Shekhar: Does Chris' budgets have rf for testing?? Chris: it should be in x.2.  
Also SC magnets are split in main linac optics (x.7) and bds (x.10)

Cawardine: Controls infrastructure for test facilities: still need to understand needs to evaluate the real resources needed. And how it maps to x.9 and x.2.

Bob: need to understand timelines. For level of funding in x.9, probably seeing delay by year or two, even at \$50M. (Spent at \$15-20M in fy06). So looking at reduction at lower limit, and roughly level at upper limit. So looking at substantial delays.