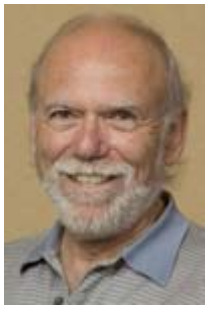
Director's Corner

10 April 2008


Barry Barish

Implementing "internal" reviews for the ILC Technical Design Phase

Last week, the new Accelerator Advisory Panel (AAP) was introduced in NewsLine. This week, I follow up with a description of its role and why I believe it will improve the quality of our R&D and design efforts. As part of preparing to undertake the next phase of our work, now called the ILC Technical Design Phase (TDP), we critically assessed the organisational structure we had for the Reference Design Report (RDR). As a result, we decided to make some significant changes. The biggest change was to incorporate a more traditional project management structure within the Global Design Effort. Another important change that we proposed to the International Linear Collider Steering Committee involves streamlining the system of technical reviews.


Bill Willis, chair of the Accelerator Advisory Panel

It is very common for large technical projects to be - or at least to seem to be - 'over-reviewed', so why do we propose to add yet another review mechanism? The time and energy that goes into preparing for and responding to reviews can be mind-boggling and can reduce efficient work on the project. Yet, having an effective system of reviews is absolutely essential in order to provide accountability and validation, which for the TDP will be provided by the ILC Project Advisory Committee (PAC). But in addition, we propose to institute reviews that can also provide deep technical insights and/or suggestions, resulting in an improved design. We propose to accomplish this through a new system of "internal" technical reviews by the AAP.

During the production phase of the RDR, we had a valuable high-level committee called the Machine Advisory Committee (MAC) that met four times in a little over a year, reported to the ILCSC, and provided the main technical reviews. The MAC reviews were very important and very good, providing both accountability and validation for our R&D programme, our design and our costing, but they did not provide the in-depth technical reviews we seek.

In the new system, the PAC will review both the detector and accelerator work and thus maintain the high-level review role for the ILCSC. The PAC, like the MAC, will carry out purely external reviews, meaning that the committee is entirely made up of members outside the ILC community, and the committee reports to ILCSC. These objective reviews by experts will provide the validation and accountability we need.

In contrast, the AAP reviews we are instituting are internal, in that the committee reports to me and that the reviewers are a mixture of insiders and outside experts. In any particular area being reviewed, this will then both contain experts and members who are close to the project but not involved in the actual work. In addition, contact members of the AAP will participate in a continuous way in relevant technical meetings as observers. In fact, the AAP has already started this process by assigning a contact person for each project manager and each of the thematic areas from our Sendai meeting, plus a couple of other contact persons covering more general themes (integration and strategy).

Themes	Project Manager	AAP
Strategic Planning	Ross	Dorfan
Conventional Facilities	Ross	Elsen
Superconducting RF	Yamamoto	Padamsee
Beam Delivery	Walker	Napoly
Damping ring	Walker	Oide
Integration	Paterson	Himel

AAP contact persons identified for Technical Design Phase thematic areas.

This scheme is a bit of an experiment and we need to learn how to implement this review mechanism for best effect. Therefore, we are starting into this process slowly, to make sure we do not inhibit the ongoing work. I am optimistic that the assigning of contact persons in the different areas will be an important step for the AAP to effectively monitor and stay close to the ongoing issues and work, and that this will make meaningful formal reviews possible.

We have not yet decided the best way for reviewers to give continuing feedback to the task leaders, but hopefully this can be done in a natural way that adds value to the work. More formally, the AAP is planning to carry out an in-depth formal review of the entire project early next year. Incorporating some outside experts into this major review will also help to give us the best possible technical reviews. Although I hate the idea that we are creating yet more reviews, I am nevertheless optimistic that this new AAP process will be of great value to the project.

-- *Barry Barish*