

The National Academy of Sciences has charged a group of scientists, the “Elementary Particle Physics in the 21st Century” (EPP2010) committee, with “prioritizing the scientific questions and opportunities that define elementary-particle physics”. Importantly, half the committee consists of scientists from fields other than particle physicists.

But communicating with this diverse group of non-experts requires a different approach than communicating with fellow particle physicists. Without funds to cover every desired large venture, projects must be justifiable both within the field, within the entire scientific community and within the US federal budget. At a recent EPP2010 meeting, some physicists did an admirable job before the committee, but it was clear that others still need to improve their presentations to a non-specialist audience. Both excellent scientific goals and effective communication are needed in the modern policy world.

Policy makers have made clear that it is not good enough to simply propose a new facility as the first step in the science policy process. Instead, scientists must elucidate the scientific questions they hope to answer. This is a healthy, grounding process for science, especially useful for publicly-funded research, which ought to be able to explain its aims clearly. Those proposing the International Linear Collider, for example, seem to have taken this lesson to heart. The ILC proponents have outlined which pressing questions the new machine would help to answer.

Supporters of two projects discussed in this issue of *symmetry* also have given strong scientific justifications. The Linac Coherent Light Source, to be built at Stanford Linear Accelerator Center, will be uniquely suited to answering important questions about molecular processes, leading to better pharmaceuticals, materials, and an improved understanding of basic science.

Also on the drawing board is the Deep Underground Science and Engineering Laboratory. Physicists, geologists, microbiologists, and others are making the case for a multi-purpose underground laboratory in an unspecified North American site. The US National Science Foundation has taken a lead in coordinating the process.

For the DUSEL project to succeed will require the stakeholders to present a unified proposal for how this laboratory will address the questions of most importance to so many scientists. Naturally, there will be political obstacles along the road, but if scientists cooperate with those in other fields, and if they are prepared to compromise for the sake of a successful proposal, an underground facility sooner or later will become reality: the scientific questions it can answer provide the imperative.

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