

## Director's Corner

23 August 2007

### Congratulations Tor!



Barry Barish

For more than two decades now, SLAC has been pursuing R&D toward a TeV-scale linear collider. In the GDE, SLAC accelerator scientists played leading roles in almost all aspects of the ILC's design effort that produced our Reference Design Report. As we move into the future, we fully expect SLAC to continue its crucial central role in our project. This week [SLAC announced](#) a restructuring of their accelerator development efforts by bringing their ILC, Large Hadron Collider R&D and High Luminosity R&D groups together into a restructured Accelerator Research Division, and named Tor Raubenheimer as the new Assistant Director. A natural question to pose is what impact these changes will have on SLAC's ILC design efforts and on Tor's central role in the GDE.

SLAC has an enviable record in the design, construction and operation of accelerator facilities, beginning with the two-mile linac itself, then SPEAR, PEP, the SLC and PEP II.

Now SLAC is developing a new machine, the Linac Coherent Light Source, which will be a powerful X-ray Free Electron Laser light source. The primary mission of the laboratory is shifting away from the high-energy physics programme. Nevertheless, SLAC has been unwavering in its dedication to the development of a linear collider, independent of technology and siting.

After the ITRP technology decision was made to develop a design based on cold, superconducting RF technology rather than room-temperature technology, SLAC rapidly joined the international effort that formed, despite the fact that they had pursued the warm option together with KEK. At that time, SLAC made Tor head of a new Linear Collider Department. The accomplishments of the GDE over the past two years are in no small part due to this instantaneous restructuring and the major contributions that came from both SLAC and KEK.

I first got to know Tor when Jon Bagger, of Johns Hopkins University, and I were co-chairs of the HEPAP panel that established a long-range plan for particle physics in the U.S., naming a linear collider, either in the U.S. or abroad, as the highest priority. Although one of the younger members of that panel, Tor was a significant contributor, and his special qualities were clearly evident to me.

Over the past two years, Tor has served a double role as leading the ILC effort at SLAC and helping guide the global design effort. In the GDE, he served as a lead accelerator physicist and as a member of the Executive Committee that consults on essentially all major policy and strategy issues and decisions. There is no denying that Tor's expanded duties at SLAC will mean that he will no longer be fully dedicated to the ILC. To acknowledge this change, I am relieving him from duties on the GDE Executive Committee. Tor has repeatedly told me over the last year that he prefers to concentrate on technical matters as we move forward, however, and I expect him to continue his strong involvement in the ILC development. In his own words Tor says, "I plan to continue as the accelerator lead for the ILC Americas region and I look forward to continuing a leading technical role in the project."

I am very fortunate that [Ewan Paterson](#) has agreed to replace Tor on the GDE Executive Committee. Ewan brings years of experience both on accelerator projects and in administration. It is generally thought that if a researcher goes into administration, they will never return to active research. Ewan has dramatically dispelled that theory by becoming a key member of the GDE, after serving for more than ten years as a SLAC Associate Director. Although I did not precisely define the role of an



Tor Raubenheimer, new SLAC Assistant Director, and his wife Jen celebrating more than the SLAC promotion.



Ewan Paterson, GDE Integration Scientist 001 with his friend 007.

integration scientist when first appointing Ewan, he defined it for us and served as the key person who worked all the complex issues between systems, enabling us to move the damping rings into a common tunnel at the centre of the ILC.

As we embark on the ILC engineering design phase, we are working to focus SLAC's efforts in fewer areas with stronger teams. Having Tor concentrate on technical issues in the GDE will facilitate this process. In addition, gaining Ewan's wisdom and experience will strengthen the GDE Executive Committee. For these reasons, I am optimistic that this is a "win-win" change for Tor, for SLAC and for the GDE.

Congratulations Tor, for the SLAC promotion, and even more to you and Jen on your recent marriage!

-- *Barry Barish*