sLHC MEETING

Summary notes of the meeting held on

24 November 2009

Present: M. Benedikt, R. Garoby, F. Haug, E. Shaposhnikova, M. Vretenar, S. Weisz

Excused: L. Evans, R. Ostojic

1) Minutes of the last meeting and follow-up:

The document detailing our provisional cost estimate for the construction of LP-SPL and PS2, and the upgrades of the SPS has been sent to the Management 2 weeks ago. The total amounts to 956 MCHF with 481 MCHF for LP-SPL, 410 MCHF for PS2 and 65 MCHF for the SPS upgrades. These estimates have an uncertainty margin of ~20%, they do not contain the CERN manpower costs. The dismantling of present and future accelerators has not been analyzed and is not included. A first comparison of LP-SPL estimates with actual SNS cost appears in the document: the exercise is delicate since US accounting includes manpower and overhead costs, but nonetheless indicates that our estimation is in the right ball park. Roland recently met Stuart Henderson, Director of SNS, who offered to cross-check this comparison of costs.

Roland reported about the Fermilab strategy as it was expressed by Pier Oddone at the recent Accelerator Advisory Committee. Fermilab will continue its ILC program until a decision to built or not this machine is taken: his view is that if LHC indicate new physics below 500 GeV, there is a good probability that ILC will be built; if there is no signal below 500 GeV, ILC will not be built and Pier estimates that it would take 10 years to finalize a CLIC proposition. A muon collider could become a credible challenger in this timescale.

In the shorter term, and taking account of the attainable budget envelope, Fermilab is considering a facility to study rare decays: a CW linac of a few GeV is most appropriate in this case, with a fine time structure (few picoseconds) that gives a good timing of the events. 2.6 GeV energy is presently considered, and the target date for the start of construction of this CW linac and associated experimental facilities is 2014. A second phase includes an accelerator from 2.6 GeV to 8 GeV to inject protons in the Main Injector. As soon as the Tevatron is stopped, neutrino physics with the Main Injector will get priority for the Booster beam, and the beam power at 120 GeV will reach 700 kW. Once the Booster is replaced with the new 8 GeV accelerator, the Main Injector will be able to deliver 2 MW of beam power.

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