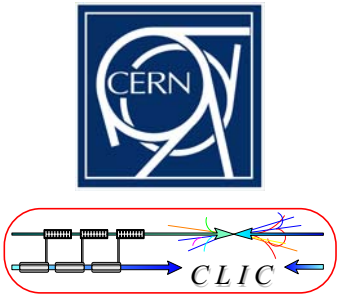

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

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European Laboratory for Particle Physics

CLIC-PLO/2007-013

Conclusions of CLIC07 Workshop

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Geneva, Switzerland
07 December 2007

Conclusions of CLIC07 Workshop

The 1st CLIC workshop which took place 16-18 October 2007 has been a great success:

- Attendance from inside and outside CERN was far beyond expectations. We had 209 registered participants, 106 from CERN and 103 from 54 external institutions spread over 17 countries.
- The feedback from participants was very positive, people were impressed by the overview talks in the plenary sessions and the amount and quality of the work presented and discussed in the working groups.

However, the workshop also revealed a number of inadequacies of the present CLIC efforts from which the main issues are summarized below for comments and potential actions. The proposed actions are printed in italics.

1) The various iterations on CLIC design and parameters during past years left people confused about what part of CLIC related publication is still valid and what is obsolete. A reference document describing up to date parameters, tolerances, and schematics with explanation is urgently needed, well before the CLIC CDR in 2010.

   Action: *In parallel with a new parameter note being prepared in style similar to CLIC-Note-627 to be ready by spring 2008, a more descriptive paper should be made available well before 2010 as a first step towards the CDR.*

2) No comprehensive list of R&D items required for the CLIC CDR 2010 is presently available. Such a list would be extremely useful for the definition of work packages for existing and new collaborations.

   Action: *A CLIC CDR work package list similar to the one which was established for CTF3 shall be prepared in the context of the presently starting CDR activities. This list will include descriptions of already existing efforts.*

3) A detailed workplan of the CLIC study beyond 2010 is missing, in particular institutes already involved in the CTF3 collaboration want to understand if and how to plan for their contribution in the future. We believe that it is highly desirable to continue these collaborations, in particular with groups which have already established relevant competences in the CLIC context.

   Action*: Based on the resources as mentioned in chapter 4 item 2 of the October 2006 CERN white paper*[1] *a workprogram with a breakdown in workpackages will be prepared for presentation at the next CLIC workshop.*

[1] *"Assuming positive results in 2010 from the CLIC technology qualifying programme with CTF3, it will be appropriate to prepare a Technical Design for implementing the CLIC programme after the LHC upgrade is achieved. This objective will require the construction of a large collaboration contributing resources, mainly manpower, between2011 and 2016. The CERN contribution is estimated to be in the range 40 MCHF per year + 200 - 230 FTE per year for the design of the accelerator and detectors, giving a total of about M + P = 250 MCHF + 1000 - 1200 FTE for the six years. The preparation of the CLIC Technical Design, simultaneously with realization of the above-described LHC upgrade, will require a modest increase in the annual budget over and above the flat one (i.e. the normal contributions of Member States for 2007 with constant purchasing power) to support the increase in manpower, i.e. about 35 MCHF".*

4) There is a strong mismatch between the considerable effort on CLIC accelerator R&D by CERN and the CLIC/CTF3 collaboration and the present efforts on CLIC physics and detector R&D. The CERN Report 2004-5 has clearly and unambiguously made the physics case for CLIC. After its completion few physics studies have been made. They have been reported at this workshop, which had a larger participation by theorists than by experimentalists. In particular, attendance by CERN was very low.. The next phase of these studies was planned to be more oriented towards detector R&D related studies but this has not materialized yet. Consequently the workshop contained talks with results of the ILC detector community, but only plans or proposals studies of the CLIC detector. However, outside (ILC) experts participated only when being invited and usually left just after their presentation of the ILC detectors. There is nothing like a dedicated CLIC detector R&D effort involving both CERN and outside experts.

   Action: *A minimum CLIC physics and detector effort has to be launched in the CERN PH department in collaboration with outside experts to back the physics case for CLIC. Corresponding resources have to be allocated by PH. Such an effort would allow getting physics feedback on the accelerator design and parameters. Furthermore, an official recommendation from the particle physics community for the Physics case of a facility in the Multi-TeV energy range with performance parameters is required.*

5) We propose to organize a 2nd CLIC workshop at CERN, 14-17 October 2008 and ask for endorsement.