

# Minutes of the meeting CLIC Civil Engineering and Services (CES)

## No.4 – 13 August 2008

Present: F.Lackner (TS/SU), C.Martel (TS/CV), J.Osborne (TS/CE), C.Hauviller (TS/HDO), I.Ruehl (TS/HE), H.Braun (AB/ABP)

Via WEBEX: A.Enomoto (KEK), V.Kuchler (FNAL)

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### 1. APPROVAL OF MINUTES OF PREVIOUS MEETING – 09 JULY 2008

The minutes of the previous meeting were approved without comment.

### 2. GENERAL INFORMATION

It is still to be defined if Karsten Kahle can continue to be the electrical specialist for CLIC.  
(Action H.Braun to seek clarification with the responsible persons within AB)

- CLIC08 Workshop details can be found at :
  - <http://project-clic08-workshop.web.cern.ch/project-clic08-workshop/>

### 3. ILC TUNNEL VENTILATION

L.Hammond from FNAL presented the ventilation principle for the ILC machine. Several points were highlighted and discussed :

- The ILC Damping Ring has a design temperature of 40°C in order to save cooling costs.
- It was confirmed that ILC does not have any ductwork in the tunnel.
- Air needs to be diverted through the WaveGuide Passageways for cooling.
- It was pointed out by CERN that PVC ducts should be avoided due to fire hazards.
- It appears that less stringent rules exist in the US, compared with Europe with regard to Legionnaires Disease.
- An important point is what is the assumed percentage of heat load that is removed via air handling. The current CLIC figure of 10% seems too high.

The heat dissipation levels received from the CLIC experts seem very high, if compared to similar machines. (*Action H. Braun to contact CLIC experts and TS/CV to better understand the heat loads*). *C.Martel will provide updated figures on the expected and actual heat loads measured in LHC. Especially where we have warm magnets in the transfer tunnels.*

#### **4. NEWS ON DETAILED CLIC LAYOUT : PHASING & SECTOR LENGTHS, BEAM DUMP POSITIONS ETC**

J.Osborne presented some long profiles for the machine that are currently being studied for the various energies. A decision is expected from the CLIC management as to which option or options to study further.

J.Osborne also presented changes in the layout of the machine with regard to the beam dump locations and sector lengths that are currently being proposed. The distance between the turnarounds and the beam dumps varies under this new scheme. *This issue will be discussed at a dedicated meeting on 9 September.*

#### **5. AOB**

5.1.1 Tunnel transport : In the absence of K.Kershaw it was decided to leave this topic for the next meeting.

#### **6. NEXT MEETINGS**

The next meeting of the CES is scheduled on **Wednesday 10 September at 14:30** in conference room **112-4-C17**. The draft agenda is :

- Machine Alignment (H.Mainaud Durand)
- Transport Update (K.Kershaw)
- CLIC Workshop in October
- AOB (general safety document ILC/CLIC ? F.Corsanego)

The regular meetings of the CES WG in 2008 are foreseen on 08/10, 12/11 and 10/12.