

CLIC Machine Advisory Committee (MAC)

Generalities

The objective of the CLIC study is to develop the technology to extend experimental physics with Electron Positron Linear Colliders into the Multi-TeV colliding-beam energy range [1]. This ambitious goal led to a novel machine concept, the Two-Beam Acceleration (TBA) scheme, consisting of the Main Beam and a parallel Drive Beam providing the RF power for acceleration [2], [3]. This requires challenging R&D both on technological and theoretical aspects concerning various subjects and novel schemes like the Drive Beam generation and High Frequency RF power production, high accelerating gradient, precise alignment and high geometrical stability, e.t.c.

The short term goal of the CLIC study [4] is to answer the main feasibility issues related to the CLIC technology by the year 2010. The study focuses on three main areas:

- a) Design of a Multi-TeV Linear Collider based on the CLIC technology including beam dynamics studies
 - b) Development of CLIC specific components, especially Accelerating Structures and Power Extraction Structures
 - c) Address the key issues of the feasibility of the CLIC scheme in a CLIC Test Facility CTF3 [5], [6], which serves as a power source for high frequency and a test bed of the two-beam concept with high power tests of CLIC components.
- CTF3 is being built in stages in the frame of a multi-lateral collaboration [7] of 16 Institutes from 11 countries, each one responsible for well identified work packages with its own resources, and managing together the project.

Mandate

A CLIC Machine Advisory Committee is being set up with the following mandate

- Assess the scope of the CLIC study and the technical choices for optimum performance and cost.
- Assess the work programme aiming at a demonstration of the main CLIC feasibility issues and the preparation of a Conceptual Design Report by 2010.
- Identify technical difficulties or risks of the study
- Check the compatibility of the available resources with the work programme
- Monitor the progress

Organisation

The MAC acts as an advisory committee reporting to the CERN DG and the CTF3 Collaboration Board

It meets at least once a year and provides a written report including recommendations at the latest two weeks after the meeting.

Members are nominated for three years.

References

[1] Physics at the CLIC Multi-TeV Linear Collider; report of the CLIC Physics Working Group; CERN-2004-05:

<http://cdsweb.cern.ch/record/749219>

[2] A 3 TeV e^+e^- Linear Collider Based on CLIC Technology ; CERN 2000-008

http://documents.cern.ch/cgi-bin/setlink?base=cernrep&categ=Yellow_Report&id=2000-008

[3] CLIC Contribution to the Technical Review Committee on a 500 GeV e^+e^- Linear Collider; CERN 2003-007;

http://documents.cern.ch/cgi-bin/setlink?base=cernrep&categ=Yellow_Report&id=2003-007

[4] URL to the web site of the CLIC study:

<http://clic-study.web.cern.ch/CLIC-Study/>

[5] CTF3 Design Report; CERN/PS 2002-008

<http://doc.cern.ch/archive/electronic/cern/preprints/ps/ps-2002-008.pdf>

[6] URL to the web site of the CTF3 project:

<http://ctf3.home.cern.ch/ctf3/CTFindex.htm>

[7] URL to the CTF3 collaboration:

https://clic-meeting.web.cern.ch/clic-meeting/2006/CTF3_Coordination_Mtg/Table_MoU.htm

Candidates for CLIC MAC

Region	Laboratory	Candidate contacted	Accepted	Alternative
CERN	CERN	L.Evans	Y	
Europe	DESY	R.Brinkmann	N	M.Huening
	ADAMS	A.Wolski	N	
America	SLAC	T.Raubenheimer,	Y	
	FNAL	V.Shiltsev	Y	
ASIA	Spring8	T.Shintake	Y	