

CLIC Study – Review of objectives for the MTP 2016-2019

Introduction

The Compact Linear Collider (CLIC) is a TeV scale high-luminosity linear e+e- collider under study and development in the framework of an international collaboration with more than 70 participating institutes from 25 countries. The accelerator is based on a novel two-beam acceleration technique, which could, in stages, reach a centre-of-mass energy up to 3 TeV.

After the conceptual design report published in 2012 and the European Strategy update in 2013, the CLIC studies are now focused on developing a project implementation plan for CLIC as a future energy frontier option at CERN after LHC. The time-period considered is up until the next European Strategy update in 2019. The study covers accelerator, detector and physics studies. The CLIC work-programme, technical R&D and design studies are carried out by the collaboration with CERN as leading institute and host of the study. High-gradient technologies are pursued in particular, as well as the development of the associated detector systems and studies of the CLIC physics potential.

Further to recent discussions held in the framework of the MTP, a review is called by the Director for Accelerators and Technology to assess the current status and in particular provide recommendations on the targets to be achieved that will be instrumental for the next European Strategy Update of 2019. The review will concentrate on the CLIC accelerator programme.

The review

The panel members are asked to:

- Assess the current status of development of knowledge in the accelerator domain, as a result of studies pursued so far in the CLIC framework;
- Assess the status and goals of the collaborative studies between CERN and its partners related to development and demonstration of key CLIC technologies;
- Identify the knowledge gap that remains to be filled to be ready for the next European Strategy Upgrade;
- Identify activities corresponding to this knowledge gap; assess the criticality and give recommendations on the prioritization and phasing of these activities to be ready for the ESU – these activities must be classified as (MoSCoW method):
 - o Must have: critical to be a success at the ESU (Vital);
 - o Should have (if at all possible): important but not necessary to be a success at the ESU (Essential);
 - o Could have (if it does not affect anything else): desirable but not necessary to be a success at the ESU ('Confort'), will typically be included if time and resources permit;
 - o Won't have (but would like in the future): least-critical or not appropriate activities before the ESU.
- Review and provide guidance concerning the content of the accelerator report(s) to be presented at the next European Strategy Upgrade.

Members of the Review Panel

- ATS Department Heads: P. Collier, JM. Jimenez, R. Losito;
- Oliver Brüning;
- Roberto Saban
- Rüdiger Schmidt;
- Florian Sonnemann;

- Maurizio Vretenar (Chair).