

CLIC Workshop 2013



from 28 January 2013 to 1 February 2013 (Europe/Zurich)

CERN

Europe/Zurich timezone

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Physics and Detector Study Website

This workshop will cover Accelerator as well as the Detector and Physics studies, with its present status and programme for the coming years.

For the Accelerator studies, the workshop spans over 5 days: January 28th to February 1st.

For the Detector and Physics studies, the workshop spans over 3 days: January 28th to January 30th.

Common parts:

- 1) Common plenary session for Accelerator, Detector and Physics on Monday afternoon
- 2) Workshop dinner on Wednesday evening

Dedicated **Accelerator sessions**:

- 3) Parallel sessions on Tuesday and Wednesday, where we attempt to have presentations of as many as possible of the activities inside the CLIC/CTF3 collaboration
- 4) High Gradient Day on Thursday focussing on development of high gradient normal conducting accelerator structures and associated high efficiency RF power units.
- 5) A plenary session on the Friday morning
- 6) A Collaboration Board Friday afternoon

Dedicated **Detector and Physics sessions**:

- 7) Parallel sessions on Tuesday and Wednesday chaired by co-conveners, attempting to give an overview of the current activities and future plans
- 8) An Institute Board meeting on Tuesday early evening.

Please join! We are looking out for the widest possible participation.



Action now



Register now and spread information to your team

members/collaborators: <https://indico.cern.ch/confRegistrationFormDisplay.py?confId=204269>

Parallel sessions:

Goal: get talks from collaborators (included – in particular – students and post.docs)

Can we have an draft by Christmas – please send to Alexia ?

Iterations will be needed

Would like to send mail to all signatories before Christmas, with improved agenda

Make Monday public ?

Main auditorium, open for anybody, advertise widely

- Introduction (+ strategy?) => CERN management (15min);
- CLIC/CTF3/Physics/Detectors (~3 talks for a total of 1 hour or a bit more);
- European Strategy => (20min);
- Coffee (20min)
- Summary talk on Higgs factories ILC/CLIC/LEP3(/gammagamma)/LHC (30min);
- HE-LHC (20min);
- LHC+HL-LHC, ATLAS + CMS (30 min);

----- **High Gradient Day at CERN 31.1.2013** -----

The CLIC project relies on large scale industrial capabilities to produce high gradient normal conducting accelerator structures, as well as high efficiency and high peak power RF power units for L-band and X-band, and in related projects, C-band.

With this in mind we hereby invite laboratories, projects and industries with interests in these topics, including other frequency structures and power units, to an open "high gradient day" at CERN Thursday 31.1.2013.

The motivation for such a meeting is twofold:

1. Review the interests/plans/visions in the world-wide research community (inside and in particular outside particle physics) for high gradient developments and associated high efficiency power sources.
2. Review the capabilities and plans of main industrial partners that can produce structures and power sources for future projects of this type, within particle physics, for future FELs or the medical field - or yet other applications.

The meeting will also allow informal contacts between existing and potential users and the relevant industries. In the longer term we would like to follow up this initial meeting with common industrial studies and developments, if there is sufficient basis for such initiatives.

The programme foreseen is as follows (draft):

Morning (9-12:00 including 30 min coffee break): Presentations from laboratories, projects and studies concerning their plans and interests for development and use of normal conduction high gradient structures and associated power sources. We estimate 20 min presentations per "project". Mid-day (12:00-15:00 allowing 1 hour for lunch): Industrial presentations from the main producers of micron-precision high gradient RF structures or components, with focus on current capabilities and future prospects, including delivering integrated RF parts/units. We estimate 15 min presentations per company (or institute with such capabilities).

Afternoon (15:15-17:45 including 30 min coffee break): Industrial presentations from the main producers of high efficiency and high peak power klystron and modulators, including future prospects and possible developments on timescale of the next decade. We estimate 15 min presentations per company.

In parallel with these sessions there will be discussions and presentations with focus on low emittance collaborative studies in the afternoon, likely to also be of interest for some of the projects with the technology ambitions mentioned above.

Have invited around 10 projects and more than 10 companies, around 10 more in progress.

Positive answer from more than half (one 1-2 saying that they will come but are not prepared to give a talk)

This day will give a good overview

More work is needed on our side to identify/estimate a realistic output and follow up plan – ahead of the meeting



Final day and goals



- Accelerator plenary – might want to move some talks originally foreseen for Monday to Friday
- CB board: Agenda to be distributed early January

Overall goals:

- Discussions and presentations of CLIC study status and future plans – and encourage discussions with LHC (existing and upgrades)
- Collaboration involvement and presentations of activities
- Join accelerator and detector/physics in common workshop
- Increase contacts to projects / companies with similar technology goals
- Define goals and milestones for end 2013 across project

**Parallel sessions Tuesday+Wednesday:
sessions are defined and conveners all nominated**

Tuesday Jan 29th

AM1: Software tools

Focussing on future software requirements

Frank Gaede, Jan Strube, Frank Simon

AM2: Simulation Studies

Performance studies, pfa, flavour tagging, electron reconstruction, background overlay and luminosity spectrum

Frank Gaede, Jan Strube, Frank Simon

PM1a: Vertex/Tracking

Dominik Dannheim, Ivan Vila

PM1b: Physics at a high energy e^+e^- collider

Overview talks reviewing physics areas at CLIC

Christoph Grojean, James Wells

PM2a: Power Pulsing

Georges Blanchot, Nathalie Seguin-Moreau and Roman Poeschl

PM2b: Spare:

Physics overflow if needed?

Institute Board

Wednesday Jan 30th

AM1 + AM2: Physics Analysis

CLIC Analysis working group meeting including status of Higgs studies.

Philipp Roloff, Mark Thomson

PM1a: Calorimetry (ECAL)

Focus on status of cost optimisation studies.

Christian Joram, John Marshall

PM1b: Engineering

Engineering/integration aspects, MDI, magnet R&D

Fernando Ramos, Karsten Buesser

PM2a: Calorimetry (HCAL)

Focus on current test-beam studies. Not intended as a general review.

Felix Sefkow, Jose Repond

PM2b: Spare

Workshop Dinner

Please join at: <http://indico.cern.ch/conferenceDisplay.py?confId=204269>