



CLIC 23rd Project Meeting: news and updates

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Agenda

- 09:30 - 09:35 **Minutes and agenda for the meeting 5'**
Speaker: Philip Burrows (Oxford University)
- 09:35 - 09:45 **Brief news and updates 10'**
- Collaboration news and CERN news
Speaker: Philip Burrows (Oxford University)
- 09:45 - 10:05 **X-Band test stand and accelerating structure testing status 20'**
Speaker: Theodoros Argyropoulos (Universidad de Oviedo (ES))
- 10:05 - 10:25 **New Design of the CLIC Drive Beam Recombination Complex for larger energy spread beams 20'**
Speaker: Dr. Eduardo Marin Lacoma (CERN)
- 10:25 - 10:45 **CTF3 operation results 20'**
Speakers: Piotr Krzysztof Skowronski (CERN), Jack Roberts (University of Oxford (GB))
- 10:45 - 11:05 **CALIFES and Two-Beam Module Status 20'**
Speaker: Wilfrid Farabolini (CEA/IRFU, Centre d'etude de Saclay Gif-sur-Yvette (FR))
- 11:05 - 11:25 **Drive Beam Injector Gun 20'**
Speaker: Kevin Pepitone (CERN)
- 11:25 - 11:30 **AOB 5'**



Christmas Drink:

Building 500 mezzanine as soon as we finish here!





Main goals/deliverables for 2018

- 1. Concise project plan document: physics, machine parameters, cost, power, site, staging, construction schedule, main technical issues, preparation phase (2019-2025) summary, detector studies.**
- 2. Preparation phase plan document: critical parameters, status and next steps 2019-2025 - what is needed before project construction start up, strategy, risks and how to address them, inside and outside CERN, and involving industry.**
- 3. Detailed, consistent technical documentation across project: EDMS/WBS based**
- 4. Technology transfer/spin-off document, including training (PhDs, postdocs, fellows)**
- 5. Comprehensive physics and detector documentation: summary papers planned 2015-2018 covering physics topics, detector studies and R&D.**



CLIC joint meeting at LCWS2015

16:00 - 18:00

CLIC Common Project Meeting

Conveners: Prof. Philip Burrows (Oxford University), Lucie Linssen (CERN)

Location: Empress C

Material: [webex info](#)

16:00 **Brief introduction to the session 5'**

Speaker: Prof. Philip Burrows (Oxford University)

16:05 **Overview of the CLIC rebaselining process and issues/plans to be addressed in preparation for the next European Strategy, 2019 20'**

Speaker: Daniel Schulte (CERN)

Material: [Slides](#)

16:25 **Ideas for the next CLIC ('preparation') Phase 2020-25 20'**

Speaker: Roberto Corsini

Material: [Slides](#)

16:45 **CLICdp work plan and foreseen documents in preparation for the next European strategy update 15'**

Speaker: Dr. Philipp Roloff (CERN)

Material: [Slides](#)

17:00 **CLICdp plans for the 5-year period following the next European strategy update 15'**

Speaker: Lucie Linssen (CERN)

Material: [Slides](#)

17:15 **Latest results on Xbox high-gradient tests 20'**

Speakers: Ben Woolley (Lancaster University (GB)), Mr. Benjamin Woolley (Lancaster University), Jorge Giner Navarro

Material: [Slides](#)



Staging baseline document

Steinar, Lucie,
Daniel, Philip,
Eva, PNB

Aim to finish
by early
2016

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Resources: reminder of MTP

	Energy frontier		35.0	36.2	34.7	30.6	23.0	27.5	187.0
26,27	Linear collider studies (CLIC, ILC, detector R&D)		28.6	27.4	22.7	17.8	10.1		106.6
	Personnel		13.1	12.6	9.8	8.9	8.9		53.3
	Materials		15.5	14.8	12.9	8.9	1.2		53.3
28	Future circular collider study		6.4	8.8	12.0	12.9	12.9		52.9
	Personnel		3.5	4.2	4.0	3.8	3.8		19.2
	Materials		2.9	4.6	8.0	9.1	9.1		33.7
	High energy frontier							27.5	27.5
	Personnel							12.6	12.6
	Materials							14.9	14.9

Input for 2016 update of MTP will start early in 2016 ...



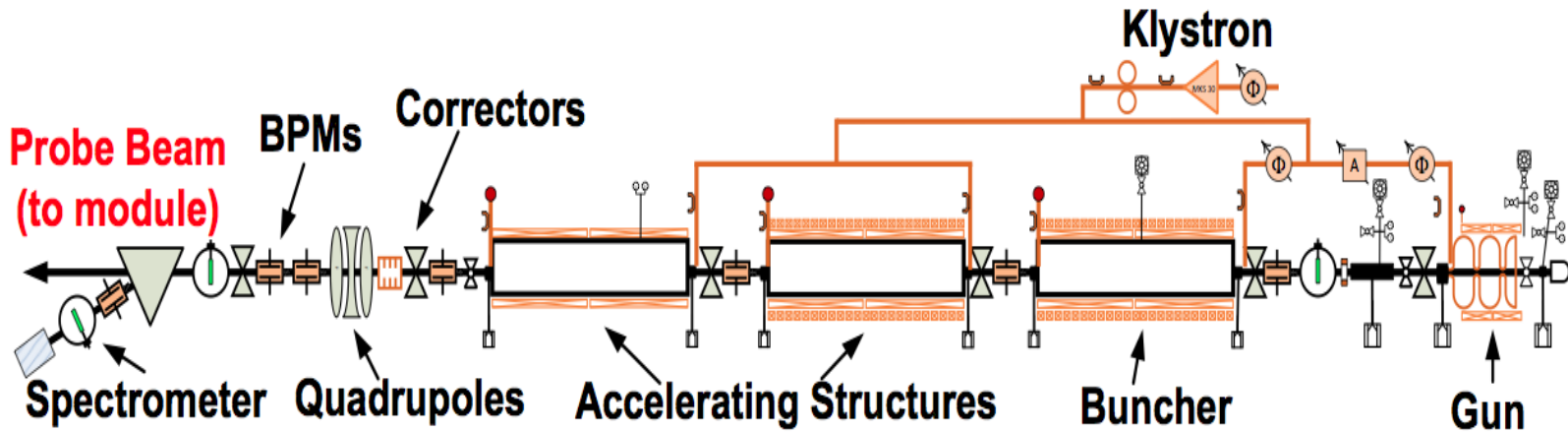
CLIC review

Preliminary agenda (talks are 20' + 10' questions)

- 09:00 – 09:10 Introduction and mandate (F. Bordry or M. Vretenar)
- 09:10 – 09:40 Project overview: structure and status, objectives for 2018, long-term (S. Stapnes)
- 09:40 – 10:10 Status and plans of X-band test-stands and structures (W. Wuensch)
- 10:10 – 10:40 Status and plans of klystron developments, including high-efficiency (I. Syratchev)
- 10:40 *Coffee break*
- 11:00 – 11:30 Status and plans of drive beam components design and test (S. Doebert)
- 11:30 – 12:00 CTF3 programme until 2016 (R. Corsini)
- 12:00 – 12:30 CLIC performance, ongoing verifications and remaining concerns (D. Schulte)
- 12:30 – 13:30 *Lunch break*
- 13:30 – 14:00 Status and plans for CLIC advanced technical components (H. Schmickler)
- 14:00 – 14:30 Status and plans of the module development programme (S. Doebert)
- 14:30 – 15:00 Collaboration status and plans (P. Burrows, Oxford U.)
- 15:00 – 15:15 CLIC resource plans until 2018 (S. Stapnes)
- 15:15 *Coffee break and question time*
- 15:45 – 18:00 **Closed session** (reviewers only)

Rescheduled → ~ Feb 2016

CALIFES



Beam parameter (end of linac)	Value range
Energy	80 - 220 MeV
Bunch charge	0.01 - 1.5 nC
Normalized emittances	2 μm in both planes
Bunch length	300 μm - 1.2 mm
Relative energy spread	1 %
Repetition rate	1 - 5 Hz
Number of micro-bunches in train	Selectable between 1 and >100
Micro-bunch spacing	1.5 GHz



Future CALIFES facility

- Advance high-gradient e- accelerator R&D
- Enable beamline/instrumentation tests for consolidating CERN accelerator complex (LHC)
- Support strategic partnerships with relevant communities: XFEL, medical, industrial, space
- Provide unique + complementary test facility for CERN's European (and worldwide) users
- Maintain accelerator training facility for next generation of accelerator scientists + engineers
- **Re-use 1/3 CTF3 area; 80% equipment available**

Document (Sept. 2015)

Expression of Interest for the future operation of the CALIFES linac

Prepared by: E.Adli (Univ. of Oslo), P.Burrows (Univ. of Oxford), R.Corsini (CERN), S. Stapnes (CERN)

Abstract

In this document we propose to operate the CALIFES electron linac at CERN, presently used as the probe beam line of CTF3, as a stand-alone user facility from 2017 onwards when CTF3 is closed down. The possible uses include general accelerator R&D and studies relevant for existing and possible future machines at CERN, involving a potentially large external user community. The resources required are around 2 MCHF/year (M+P).

1. BACKGROUND and MOTIVATION

The CLIC study is addressing primary goals of the European Particle Physics Strategy. It is advancing the design of an energy-frontier electron-positron linear collider (LC), for

CLIC Workshop 2016



CLIC Workshop 2016

18-22 January 2016
CERN
Europe/Zurich timezone

Overview

Speaker List

The **CLIC workshop 2016** 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: 18th -22nd of January.
For CLICdp, the workshop is scheduled from Tuesday afternoon January 19th to lunchtime on Friday



CLIC Workshop 2016

Preliminary programme

Common parts:

- 1- There will be an open plenary session on Wednesday afternoon January 20th, giving an overview of the CLIC project (accelerator, physics/detector), placed in the context of other studies for machines at the energy frontier.
- 2- A common plenary accelerator/detector&physics Friday morning January 22nd.
- 3- Workshop dinner on Wednesday evening.

Dedicated Accelerator sessions:

- 1- Parallel sessions on Monday afternoon, Tuesday and Wednesday morning
- 2- A session Thursday covering High Efficiency RF Power sources development for CLIC as well as other accelerator applications like ESS, FCC and other high-power electron and proton linacs.
- 3- A Collaboration Board Friday afternoon

Dedicated Detector and Physics sessions:

- 1- Topical sessions on Tuesday afternoon, Wednesday morning and all of Thursday. As usual these sessions will be organised subject-wise by their conveners.
- 2- The CLICdp Institute Board meeting will take place over lunch on Thursday.



Collaboration Board

Lenny Rivkin reaches end of his mandate as CB Chair in December 2015

Roger Ruber has been elected as incoming CB Chair, will start at next CB meeting on January 22



Some 2016 dates

Project meetings: Draft dates to be defined

ECFA regional LC workshop: Santander, 30/5 – 5/6

LCWS16: Asia, November