



CLIC Collaboration working meeting addressing the 2012-16 workpackages

3-4 November 2011 *CERN*
Europe/Zurich timezone

Timetable

Registration

↳ Registration Form

List of registrants

Portable Computers
registration

CERN regular shuttle
timetable

Dates: from 03 November 2011 09:00 to 04 November 2011 18:00

Timezone: Europe/Zurich

Location: *CERN*
Room: Multiple rooms

Welcome to all

Outline:

- CDR status
- 2012-16 planning information
- 2012-16 information still needed
- Goals of meeting and practical information



Goal 2011 - CDR and feasibility issues

Main linac gradient

- Accelerating structure

Drive beam scheme

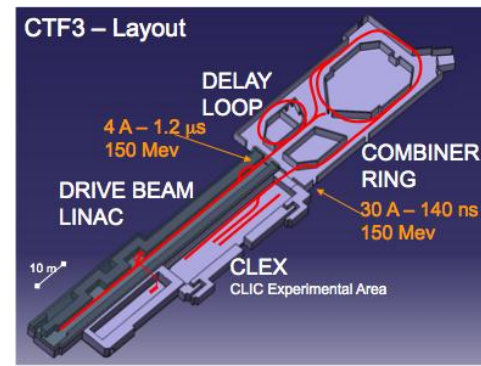
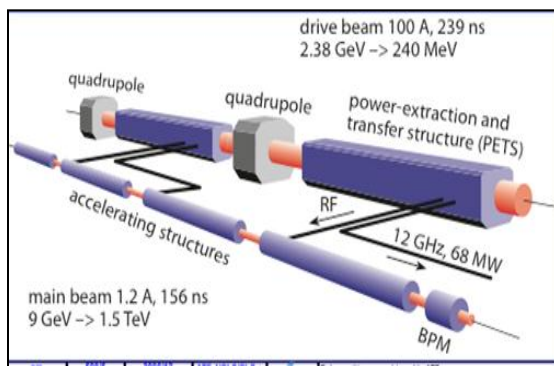
- Drive beam generation
- PETS
- Two beam module
- Drive beam deceleration

Luminosity

- Main beam emittance generation and preservation, focusing
- Alignment and stabilisation

Operation and Machine Protection System (robustness)

Detector (experimental conditions)





The CDR(s)

CDRs:

- Vol 1: The CLIC accelerator and site facilities (H.Schmickler)
 - CLIC concept with exploration over multi-TeV energy range up to 3 TeV
 - Feasibility study of CLIC parameters optimized at 3 TeV (most demanding)
 - Consider also 500 GeV, and intermediate energy ranges
- Vol 2: The CLIC physics and detectors (L.Linssen)
- Vol 3: CLIC study summary (S.Stapnes)
 - Summary and available for the European Strategy process, including possible implementation stages for a CLIC machine as well as costing and cost-drives
 - Proposing objectives and work plan of post CDR phase (2012-16)
- Timescales:
 - By end 2011: aim to have Vol 1 and 2 completed
 - Spring/mid 2012: Vol 3 ready for the European Strategy Open Meeting

Main information page:

<http://clic-study.org/accelerator/CLIC-ConceptDesignRep.php>

Accelerator <http://project-clic-cdr.web.cern.ch/project-CLIC-CDR/>

- About 90% of the contributions received
- Good progress

Physics and Detectors <http://lcd.web.cern.ch/LCD/CDR/CDR.html#Overview>

- Very good progress and status – complete draft available and have been reviewed

A link providing the opportunity to subscribe as a signatory for the CLIC CDR can be found on the main information page



Accelerator CDR status – snapshot

The linked documents (in blue)
are all the drafts

Still un-submitted parts

Help needed on the editorial
side

Status of Contributions	Colour Code	Statistics (as of 31/10/2011)
Not Received		5
Draft Received		13
Final version Received		3
With IEB		30
With Copy Editing		
Final		

Chapter	Section	Responsible Author	Status
Foreword	Foreword	S. Staples	With IEB
The CLIC concept: Key Issues and feasibility	Introduction	J.P. Delahaye	With IEB
The CLIC concept: Key Issues and feasibility	CLIC scheme overview	J.P. Delahaye	With IEB
The CLIC concept: Key Issues and feasibility	CLIC key issues	J.P. Delahaye	With IEB
The CLIC concept: Key Issues and feasibility	Explanation of the CLIC two-beam acceleration scheme	G. Geschonke	With IEB
The CLIC concept: Key Issues and feasibility	Creation of ultra low emittance beams	Y. Papaphilippou	With IEB
The CLIC concept: Key Issues and feasibility	Highest Luminosity; Preservation of ultra-low emittances	D. Schulte	With IEB
The CLIC concept: Key Issues and feasibility	Drive Beam generation and Main Beam RF power production	R. Corsini	Not Received
The CLIC concept: Key Issues and feasibility	X-band RF structures (Accelerating and PETS)	W. Wuensch	With IEB
The CLIC concept: Key Issues and feasibility	Machine Protection	M. Jonker	With IEB
The CLIC concept: Key Issues and feasibility	Other critical technology items	H. Schmickler	Received
The CLIC concept: Key Issues and feasibility	Present level of achievement and outlook for the next years	J.P. Delahaye	Draft Received
Accelerator Physics description of the Main Beam complex	Injectors	S. Doebert	With IEB
Accelerator Physics description of the Main Beam complex	The Damping Rings Complex	Y. Papaphilippou	Draft Received
Accelerator Physics description of the Main Beam complex	Ring to main linac transport (RTML)	F. Stulle	With IEB
Accelerator Physics description of the Main Beam complex	Main linacs	D. Schulte	With IEB
Accelerator Physics description of the Main Beam complex	Beam delivery systems	R. Tomas Garcia	Draft Received
Accelerator Physics description of the Main Beam complex	Machine detector interface	L. Gatignon	With IEB
Accelerator Physics description of the Main Beam complex	Post-collision line	E. Gschwendtner	With IEB
Accelerator Physics description of the Drive Beam complex	Drive Beam Accelerators	R. Corsini	Draft Received
Accelerator Physics description of the Drive Beam complex	Frequency multiplication	C. Biscari	Draft Received
Accelerator Physics description of the Drive Beam complex	Beam Transport	B. Jeanneret	Draft Received
Accelerator Physics description of the Drive Beam complex	Decelerator	E. Adli	With IEB
Accelerator Physics description of the Drive Beam complex	Dump Lines	B. Jeanneret	With IEB
Technical description of the accelerator components	Sources	S. Doebert	With IEB
Technical description of the accelerator components	Warm Magnets	M. Modena	With IEB
Technical description of the accelerator components	Superconducting magnets	S. Russenschuck	With IEB
Technical description of the accelerator components	Radio Frequency systems	E. Jensen	Draft Received
Technical description of the accelerator components	Main Linacs Radio Frequency systems (X-Band)	W. Wuensch	Received
Technical description of the accelerator components	Two-Beam Module	G. Riddone	With IEB
Technical description of the accelerator components	Vacuum systems	M. Jimenez	Draft Received
Technical description of the accelerator components	Powering CLIC	S. Pittet	With IEB
Technical description of the accelerator components	Beam Instrumentation	T. Lefevre	With IEB
Technical description of the accelerator components	Beam Transfer	B. Goddard	Draft Received
Technical description of the accelerator components	Beam intercepting devices	R. Losito	Not Received
Technical description of the accelerator components	Machine detector interface	L. Gatignon	With IEB
Technical description of the accelerator components	Controls	M. Draper	Draft Received
Technical description of the accelerator components	Fine Time Generation and Distribution	J. Serrano	With IEB
Technical description of the accelerator components	Real-time Feedback Systems	G. Morpurgo	Draft Received
Technical description of the accelerator components	Machine protection	M. Jonker	With IEB
Technical description of the accelerator components	Active pre-alignment systems	H. Mainaud Durand	With IEB
Technical description of the accelerator components	Main Beam quadrupole stabilization equipment	K. Artoos	With IEB
Technical description of the accelerator components	Total Power Consumption	P. Lebrun	Draft Received
Civil engineering and technical services	Civil engineering	J. Osborne	With IEB
CLIC technologies demonstrated in CTF3	CLIC technologies demonstrated in CTF3	R. Corsini	Draft Received
Energy scanning	CLIC Operation at Low Energies	D. Schulte	With IEB
Staged Construction	Motivation and possible scenarios for staged construction	P. Lebrun	Not Received
Staged Construction	Preliminary design of a 500 GeV accelerator	D. Schulte	With IEB
Staged Construction	Parameter space for other intermediate energies	D. Schulte	Not Received
Staged Construction	Construction Schedules	K. Foraz	Not Received
CLIC Parameters	CLIC Parameter Tables	F. Tecker	Received



Physics and Detector CDR

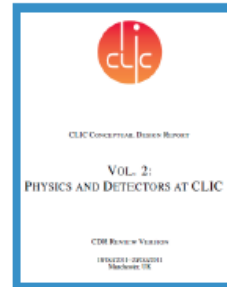


Feedback from review

Review of Volume 2 in Manchester Oct 18-20 went very well.
<https://indico.cern.ch/conferenceDisplay.py?confid=146521>
(17 presentations on the project)

The committee did a thorough job.
We received many questions.
Most of those questions were clarified during the review.

Overall favourable feedback from the committee.



CDR status and short-term plans

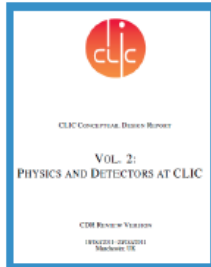


The CDR contents will be **finalised before the end of 2011**.
During the ~8 weeks between the Review and the final publishing,
the CDR will be complemented with:

- ** Inclusion of Review comments and correction of errors.
Small modifications, otherwise adaptations of future plans
- ** CLIC physics potential with polarised beams
A few examples, work in progress => additional section in chapter 1
- ** Measurement of the luminosity spectrum using bhabha scattering.
Work in progress

The CLIC physics&detector CDR will be presented to the **CERN Scientific Policy Committee**, December 12+13th, 2011

Publication of the CDR in the form of a **CERN yellow report**



CDR Signatories List



Subscribe here

List of signatories

CLIC website

Linear Collider Detector
@ CERN

CLIC CDR Vol. 1 -
Accelerator

CLIC CDR Vol.2 - Physics
and Detectors

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and Detectors

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CDR Signatories Subscription Form

Registration period: 08/09/2011 - 30/11/2011

Please, note that fields marked with * are mandatory

Personal Data

First Name *

Surname *

Email *

Institute

Please indicate the institute you are affiliated with. Optionally, you may indicate other institutes that have supported your work. (Please note that the institute names will be written in full in the actual CDR report).

Main Institute

Additional Institute

Other Institute

Confirmation

At submission of your subscription as CDR signatory, you will receive an automatic notification e-mail. At a later stage, a final confirmation e-mail will be sent to all validated signatories of the CDR.

[register](#)

<https://indico.cern.ch/conferenceDisplay.py?confId=136364>



CLIC Project Meeting

Managers: Stapnes, S.; Tecker, F.

December 2011

09 Dec [CLIC Project Meeting #5](#)

October 2011

28 Oct [CLIC Project Meeting #4](#)

21 Oct [CLIC Project Meeting #4](#)

September 2011

02 Sep [CLIC Project Meeting #3](#)

July 2011

08 Jul [CLIC Project Meeting #2](#)

June 2011

01 Jun [CLIC Project Meeting #1](#)

The project meetings are open and on EVO, stay involved and informed:

<http://indico.cern.ch/categoryDisplay.py?categId=3589>

Friday 08 July 2011

09:00 - 09:45 General News and Issues

09:00 **Minutes** 10'

Material: [Minutes](#)

09:10 **Actions and Critical Issues** 10'

09:20 **News and updates** 20'

- General news
- WP planning
- CDR update

Material: [Slides](#)

09:45 - 10:00 Detector/Physics report

Convener: Lucie Linssen (CERN)

Material: [slides](#)

10:05 - 10:40 Recent developments

Conveners: Roberto Corsini (CERN), Dr. Hermann Schmickler (CERN), Daniel Schulte (CERN)

10:05 **CTF3 status and next steps** 07'

Speaker: Steffen Doebert (CERN)

Material: [Slides](#)

10:15 **Technical systems - news** 07'

Material: [Slides](#)

10:25 **Beam dynamic** 07'

Material: [Slides](#)

10:40 - 12:40 RF structures and test-facilities

10:40 **Structure programme and the need for test facilities** 15'

RF structure test-programme.

Critically review the capabilities to produce the number and variety of structures proposed, identify follow up points

Introduce about the test capacity needed: Covering KEK-SLAC, "traditional" X-band facilities at CERN and other collaborators, multitube systems at CERN and outside CERN introduce, justify the needs

Speaker: Walter Wuensch (CERN)

Material: [Slides](#)

11:05 **Coffee Break** 25'

11:35 **Experiences with and status of the X-band testing facility at CERN** 15'

- Experiences with current klystron and options ahead
- CPI order and purchase options
- Plans for 2-3 such systems at CERN

Followed by a discussion including collaborators that could aim to install such systems

Speaker: Gerard McMonagle (CERN)

Material: [Slides](#)

12:15 **Multitube power systems** 15'

Technical implementation of a cluster of tubes/systems

Discussion of next steps towards agreeing on specifications and verification test needed.

Followed by a discussion of the programme for such systems, next steps

Speaker: Igor Syratchev (CERN)

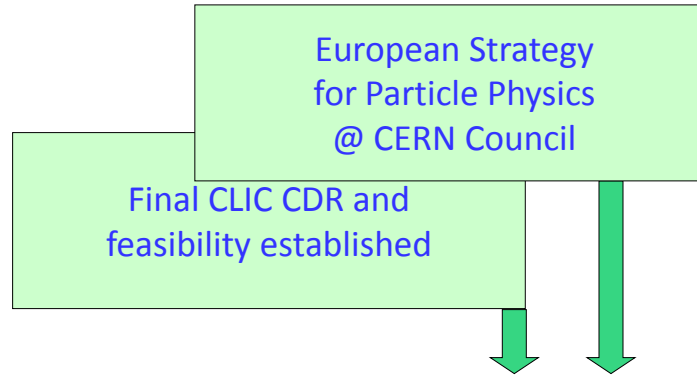
Material: [Slides](#)

12:45 - 13:00 Wrap up, next meeting, AOB

Material: [slides](#)



The real focus of this meeting - CLIC 2012-16



	2010	2011	2012	2013	2014	2015	2016	2017
Feasibility issues (Accelerator&Detector)	█	█							
Conceptual design & preliminary cost estimation	█	█							
Engineering, industrialisation & cost optimisation			█	█	█	█	█	█	?
Project Preparation			█	█	█	█	█		
Project Implementation								█	?

After 2016 – Project Implementation phase:

Including an initial project to lay the grounds for full construction (CLIC 0 – a significant part of the drive beam facility: prototypes of hardware components at real frequency, final validation of drive beam quality/main beam emittance preservation, facility for reception tests – and part of the final project)

- Finalization of the CLIC technical design, taking into account the results of technical studies done in the previous phase, and final energy staging scenario based on the LHC Physics results, which should be fully available by the time
- Further industrialization and pre-series production of large series components with validation facilities



The next steps – focusing points

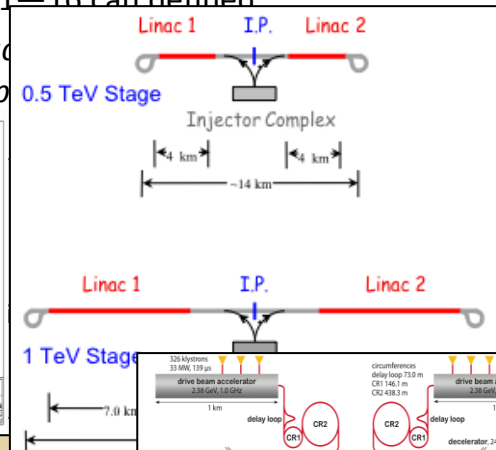
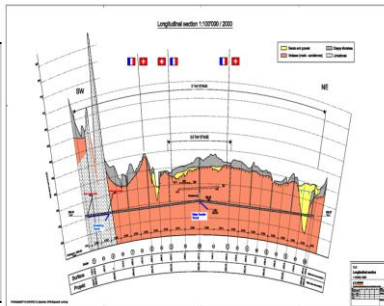
In order to achieve the overall goal for 2016 the follow four primary objectives for 2011–16 can be defined:

These are to be addressed by activities (studies, working groups, task forces) or work-packages, developments, prototyping and tests of single components or larger systems at various phases.

Define the scope, strategy and cost of the project implementation.

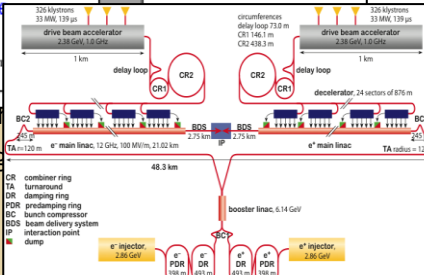
Main input:

- The evolution of the physics findings at LHC and other relevant d
- Findings from the CDR and further studies, in particular concerni implementation.
- A Governance Model as developed with partners.



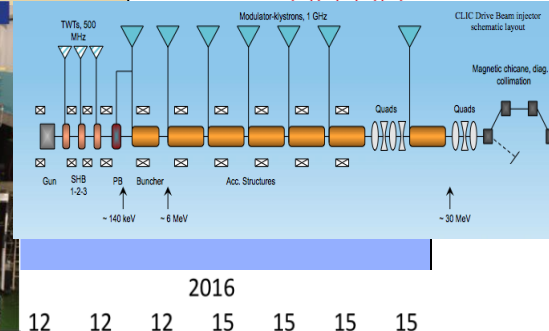
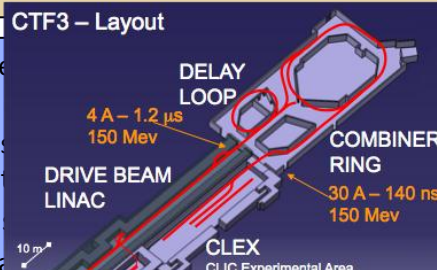
Define and keep an up-to-date optimized overall baseline design that can achieve the scope within a reasonable schedule.

- Beyond beam line design, the energy and luminosity of the machine, key studies will address stability and alignment, stray fields and dynamic vacuum including collective effects.
- Other studies will address failure modes and operation issues.

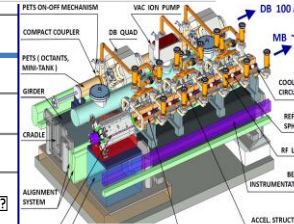
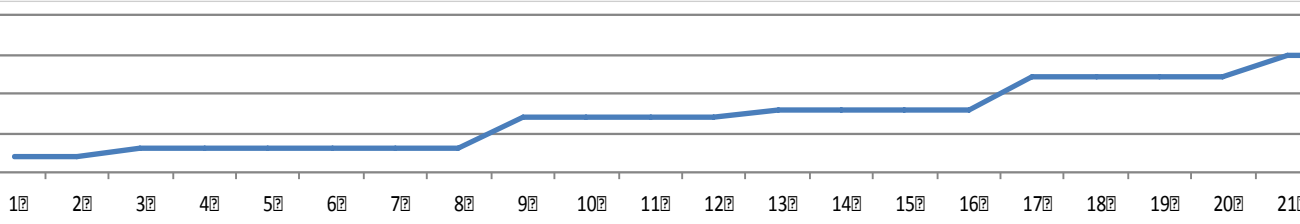
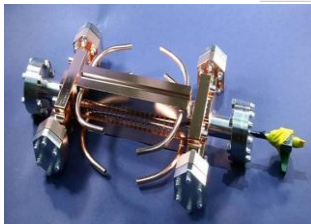
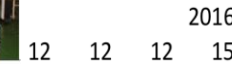
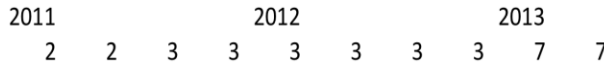


Identify and carry out system tests to support the project implementation.

- The priorities are the measurement of the beam stability, RF power generation and distribution (other system tests to be defined) (technical work-packages to be defined)



number of rf ports





Work-packages and responsibilities

	Old Name	New Name	Name	WP Holder	Note
General	CLIC-001		CLIC General	S. Stapnes	
Parameters and design Daniel Schulte	BPH-BASE BPH-SIM BPH-FEED BPH-MP BPH-BCKG BPH-POL BPH-SRC E BPH-SRC P BPH-DR BPH-RTML BPH-ML BPH-BDS BPH-MDI BPH-DRV	CD-BASE CD-SIM CD-LUMI CD-OP CD-BCKG CD-POL CD-ESRC CD-PSRC CD-DR CD-RTML CD-ML CD-BDS CD-MDI CD-DRV	Integrated Baseline Design and Parameters Integrated Modelling and Performance Studies Feedback Design Machine Protection & Operational Scenarios Background Polarization Main beam electron source Main beam positron source Damping Rings Ring-To-Main-Linac Main Linac - Two-Beam Acceleration Beam Delivery System Machine-Detector Interface (MDI) activities Drive Beam Complex	D. Schulte A. Latina D. Schulte (interim) M. Jonker D. Schulte (interim) - S. Doebert Y. Papaphilippou A. Latina D. Schulte (placeholder) R. Tomas L.Gatignon B. Jeanneret	Searching (S.Doebert interim contact point) ABP request 2013 (also linked to CTF3 activities) ABP request 2014 - (also linked to CTF3 activities)
Experimental verification Roberto Corsini	CTF3-001 CTF3-002 CTF3-003 CTF3-004 CLIC0-001 CLIC0-002 BTS-001 BTS-002		CTF3 Consolidation & Upgrades Drive Beam phase feed-forward and feedbacks TBL+, X-band high power RF production & structure testing Two-Beam module string, test with beam CLIC 0 drive-beam front end facility (including Photoinjector option) Drive Beam Photo Injector Accelerator Beam System Tests (ATF, Damping Rings, FACET,...) Sources Beam System Tests	F. Tecker P. Skowronski S. Doebert - S. Doebert S. Doebert R. Tomas -	ABP request 2013 (see above) (Tasks holders: R.T., Y.P. and A.L.) Collaborators? split in 2 ?
Technical Developments Hermann Schmickler	CTC-001 CTC-002 CTC-003 CTC-004 CTC-005 CTC-006 CTC-008 CTC-011 CTC-012 CTC-013 CTC-014 CTC-015 CTC-016 CTC-017	CTC-WIG CTC-SUR CTC-QUA CTC-TBM CTC-WMP CTC-BDI CTC-PCLD CTC-CO CTC-RF CTC-EPC CTC-VAC CTC-MM CTC-BT CTC-MME	Damping Rings Superconducting Wiggler Survey & Alignment Quadrupole Stability Two-Beam module development Warm Magnet Prototypes Beam Instrumentation Post Collision Lines and Dumps Controls RF Systems (1 GHz klystrons & DB cavities, DR RF) Powering (Modulators, magnet converters) Vacuum Systems Magnetic stray Fields Measurements Beam Transport Equipment Creation of a "CLIC technology center@CERN"	P. Ferracin H. Mainaud K. Artoos G. Riddone M. Modena T. Lefevre E. Gschwendtner M. Draper E. Jensen (placeholder) S. Pittet C. Garion S. Russenschuck M. Barnes F.Bertinelli	BI request 2012 RF request 2014?
X-band Technologies Walter Wuensch	RF-DESIGN RF-XPROD RF-XTESTING RF-XTESTFAC RF-R&D	RF-DESIGN PRODUCTION TESTING TEST AREAS HIGH-GRADIENT	X-band Rf structure Design X-band Rf structure Production X-band Rf structure High Power Testing Creation and Operation of x-band high power Testing Facilities Basic High Gradient R&D	A.Grudiev, I. Syrathev G.Riddone S.Doebert E.Jensen (placeholder) S.Calatroni	RF request 2012, move construction to Technial Developments when defined
Implementation studies Philippe Lebrun		IS-CES IS-PIP	Civil Engineering & Services Project Implementation Studies	J. Osborne P.Lebrun	



Example of WP

WP: Production- Workpackage leader: G.Riddone	Purpose/Objectives/Goals	Deliverables (incl. approx. resource estimate)	Schedule
Task 1: Construction of baseline accelerating structures	Test structures for statistical and long term high-power testing with all damping features and high power couplers (for SATS and Test modules in CLEX) è we have to make sure that we count all the structures. including those for the CLEX modules	3 generations of test structures, total quantity 48, total cost ~6 MCHF.	12 in 2013, 12 in 2014, 12 in 2015, 12 in 2016
Task 2: Supply of small series development prototypes and/or medium power test structures	Test structures for full features (4), wakefield monitor equipped (4), optimized high-power design (8), different machine energy optima (4), optimized process (8), develop DDS (2) and choke (2), compressor (2)	Typically 12 variants in series of 4 structures each, total quantity 40, total cost ~6 MCHF.	8 structures per year
Task 3: Supply baseline PETS (note: most PETS fabrication accounted elsewhere, e.g. TBL)	PETS for statistical and long term high-power testing	4 PETS, total cost 0.2 MCHF.	2 in 2013, 1 in 2014, 1 in 2015
Task 4: PETS for ON/OFF testing	PETS for on/ off test	2 generations 0.1 MCHF	
Task 5: Alternative fabrication method	Explore alternative fabrication methods	Structure fabricated with alternative procedure	2012-2016
Task 6: Baseline to pre-series development	Take the fully tested x band rf Systems and evolve their production techniques to an industrialized process		2015 onwards

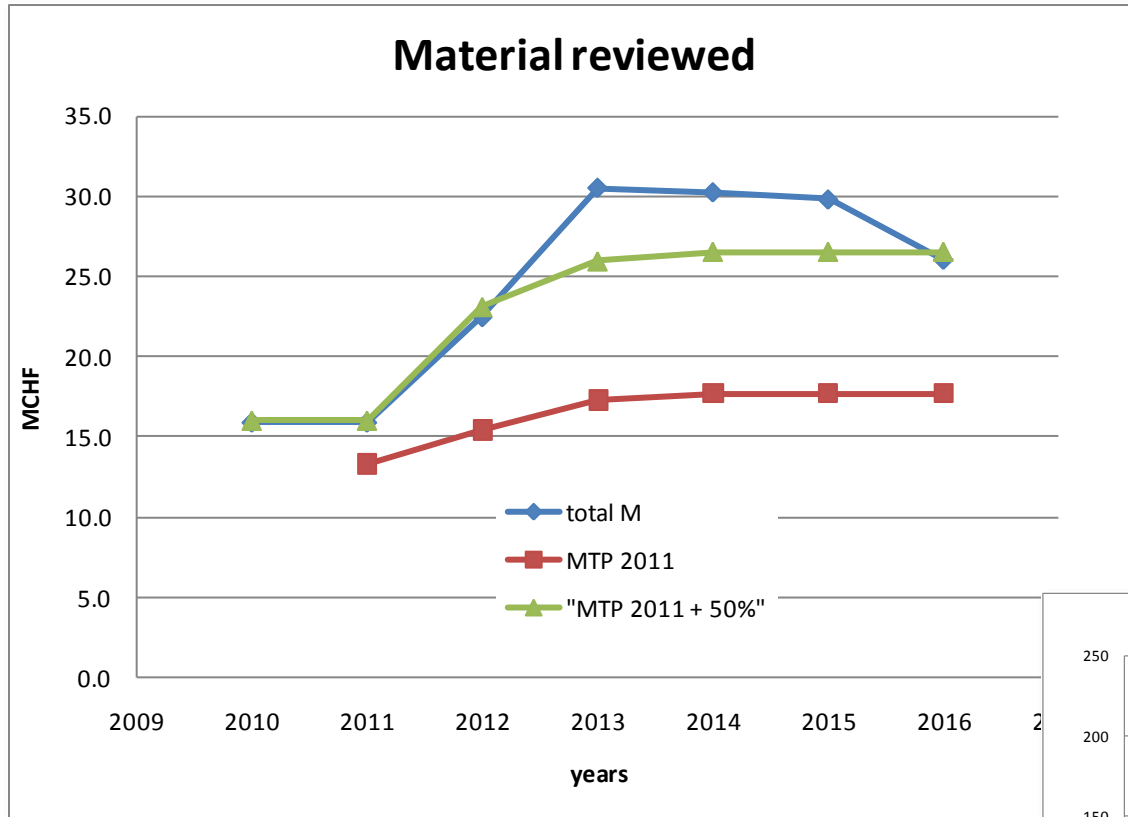
Additional information or comments: could be link to more information

Link to other WPs/activities: This WP is integrated to WPs CTF3-002, CTF3-003 and CTF3-004

Key partners: already engaged (CEA-IRFU, HIP, Dubna-JINR, Greece, Spain) or potential (Greece, Pakistan)

Estimated resources (needed):	2012	2013	2014	2015	2016	Total
Material (kCHF)	3000	3000	3100	3300	3400	15800
Personnel (FTE)	9	9	11	12	12	53
Resource comment:						

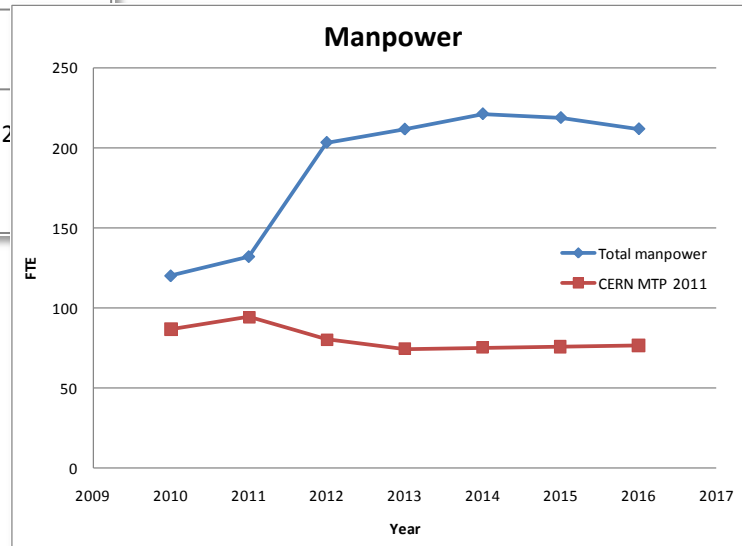
Initial resource planning versus availability in CERN MTP



Problem for personnel worse, as CERN planning is essentially flat

Total integrated: 140 MCHF (still being re-fined)
In CERN MTP: 86 MCHF

S





Available information - summary

- Overview of work-packages and responsibilities (shown)
- Description of work-packages (5 EXCEL tables, corresponding to the 5 activity areas, in the INDICO page with one sheet per work-package (example of a single WP shown)
 - Includes estimates of resources needed
 - Adding up give total resources needed for 2012-16
- CERN MTP plan for 2012-16 available for comparison
- Conclusion: We need to find substantial resources outside CERN and will rely on the collaboration



The CLIC International Collaboration

CLIC multi-lateral collaboration - 41 institutes from 21 countries



ACAS (Australia)
 Aarhus University (Denmark)
 Ankara University (Turkey)
 Argonne National Laboratory (USA)
 Athens University (Greece)
 BINP (Russia)
 CERN
 CIEMAT (Spain)
 Cockcroft Institute (UK)
 ETH Zurich (Switzerland)
 FNAL (USA)

Gazi Universities (Turkey)
 Helsinki Institute of Physics (Finland)
 IAP (Russia)
 IAP NASU (Ukraine)
 IHEP (China)
 INFN / LNF (Italy)
 Instituto de Fisica Corpuscular (Spain)
 IRFU / Saclay (France)
 Jefferson Lab (USA)
 John Adams Institute/Oxford (UK)

John Adams Institute/RHUL (UK)
 JINR (Russia)
 Karlsruhe University (Germany)
 KEK (Japan)
 LAL / Orsay (France)
 LAPP / ESIA (France)
 NIKHEF/Amsterdam (Netherlands)
 NCP (Pakistan)
 North-West. Univ. Illinois (USA)
 Patras University (Greece)

Polytech. Univ. of Catalonia (Spain)
 PSI (Switzerland)
 RAL (UK)
 RRCAT / Indore (India)
 SLAC (USA)
 Thrace University (Greece)
 Tsinghua University (China)
 University of Oslo (Norway)
 Uppsala University (Sweden)
 UCSC SCIPP (USA)



Information needed

Collaborators: general information and resource estimate								
Institute:	??? Institute of Physics							
Main contacts:	Names of resp. at your institute							
CERN responsible:	Walter Wuensch (in this example), and/or name of work-package leader							
Activity/work package/task:	X-band rf/high-gradient/task 2 fundamental studies (in this example)							
Technical subject:	Fundamental breakdown studies (in this example)							
Working arrangement:	Independent group working in ???, PhD student at CERN, frequent visits and common workshops, hardware at home, testing at CER, etc .. (to be detailed in discussions)							
Funding status:	Have secured funds 2012-13, applying for 2014-15							
Formal agreement:	CFT3 collaboration agreement, k-contract, protocol(annex) to CERN co-operation agreement, etc. Valid until April 2012, expired							
Expected resources		2012	2013	2014	2015	2016	Comment	
	Material budget [CHF at current rate]	50	40	110	110	80	whatever	
	Manpower at institute [FTEyears]	3.5	3.5	3.5	3.5	3.5	2 phd.students, 0.5 prof, 1 engineer	
	Manpower at CERN [FTEyears]	1	1	1	1	1	1 phd student	

We have received ~40 such tables, indicating that there will be substantial help on the personnel side, while the material contributions will be more limited:

- 1.7 MCHF estimated in 2012 – going down with time, 48 FTE in institutes and 24 at CERN from inst. – also going down with time
- Plus: Still more input expected, and we observe that the collaborators are careful promising beyond their current funding horizon
- Minus: We also need to analyze carefully how the resources are matched to our needs



Collaboration

- The primary goal of this exercise is to identify the work-capability (WP-task-actual work) and resources (personnel and material) available in the collaboration for the various WPs
- The secondary goal is to understand the formal status (annexes to MoU or similar) of your link to CLIC and make sure we update and improve wherever needed for next period
- The third objective is to create direct links between people responsible for activities and work-packages and collaborators taking on responsibilities



CLIC Collaboration working meeting addressing the 2012-16 workpackages

3-4 November 2011 CERN
Europe/Zurich timezone

CLIC Collaboration working meeting addressing the 2012-16 workpackages

from Thursday, 3 November 2011 at 09:00 to Friday, 4 November 2011 at 18:00 (Europe/Zurich)
at CERN (Multiple rooms)

Manage ▾

Go to day ▾

Thursday, 3 November 2011

- | | | |
|---------------|---|---|
| 09:00 - 10:00 | Work-package planning plenary session
Location: Council Chamber
Material: CLIC Workpackages and responsables | ▾ |
| 10:00 - 12:30 | Implementation Studies
- <i>Civil Engineering & Services (IS-CES)</i>
- <i>Project Implementation Studies (IS-PIP)</i>
Convener: Philippe Lebrun (CERN)
Location: 18-3-030
Material: Collaboration data needed Workpackages | ▾ |
| 10:00 | Civil Engineering & Services 30'
- <i>Followed by discussion of/with potential partners</i>
Speaker: John Andrew Osborne (CERN) | ▾ |
| 10:45 | Project Implementation studies 30'
- <i>Followed by discussion of/with potential partners</i>
Speaker: Philippe Lebrun (CERN) | ▾ |

Timetable

Registration

↳ Registration Form

List of registrants

Portable Computers
registration

CERN regular shuttle
timetable

<https://indico.cern.ch/conferenceDisplay.py?confId=156004>



Inside CERN more is needed: EXCEL sheets for each task in each work-package: need about 200 tables like below

sounds scaring, but this is only about 4 per work-package holder

(Note: "Collaborator (MoU) M(KCHF)" is ZERO as asked by Hermann since is falling inside the CERN-UK Collaboration)

2012										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	
P(FTE)	M(KCHF)	M>P (kCHF)	P<M(FTE)	PSI (FTE)	PFE(FTE)	M (KCHF)	P (FTE)	M (KCHF)	P (FTE)	M (KCHF)
7	320	120	2	2	1	200	2			
2013										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	
P(FTE)	M(KCHF)	M>P (kCHF)	P<M(FTE)	PSI (FTE)	PFE(FTE)	M (KCHF)	P (FTE)	M (KCHF)	P (FTE)	M (KCHF)
7	320	120	2	2	1	200	2			
2014										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	
P(FTE)	M(KCHF)	M>P (kCHF)	P<M(FTE)	PSI (FTE)	PFE(FTE)	M (KCHF)	P (FTE)	M (KCHF)	P (FTE)	M (KCHF)
7	320	120	2	2	1	200			2	
2015										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	
P(FTE)	M(KCHF)	M>P (kCHF)	P<M(FTE)	PSI (FTE)	PFE(FTE)	M (KCHF)	P (FTE)	M (KCHF)	P (FTE)	M (KCHF)
7	370	120	2	2	1	250			2	
2016										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	
P(FTE)	M(KCHF)	M>P (kCHF)	P<M(FTE)	PSI (FTE)	PFE(FTE)	M (KCHF)	P (FTE)	M (KCHF)	P (FTE)	M (KCHF)
7	320	120	2	2	1	200			2	
Total (2012-2016)										
total		CERN only					Collaborator (MoU)		Collaborator (possible)	



Roadmap to APT implementation at CERN

- Start organizing a sequence of meetings between resource holders (mainly GLs)- CLIC work-package leaders – and (if needed) Hermann.
Target: Get refined and ‘feasible’ work-packages definitions by the end of the year.
- Need a matrix of CLIC work-packages versus all concerned CERN groups.
- **3rd/4th November: Present/discuss and plan work-packages with collaborators. Significant participation is crucial for the success of the overall programme.**
- January 2012: Prioritization by the CLIC study team
- February 2012: Implementation into APT at CERN in time for the MTP to Council



Summary

- Please sign up for the CDR:
<https://indico.cern.ch/conferenceDisplay.py?confId=136364>
- Activity and WP leaders:
 - Update WP info – there are still things to fix
 - Help collaborators to specify their contributions so it can be accounted for and define clear personal links
 - Work on CERN group matrix
- Collaborators:
 - Study WPs to understand possibilities and seek contact
 - We need input from all collaborators, if at all possible by the end of the meeting, and latest by 15.11
 - Create well-defined links to WPs and Activities
 - Provide also input about formal collaborations documents needed (new, updates, adaptations ..)



CLIC Collaboration working meeting addressing the 2012-16 workpackages

3-4 November 2011 CERN
Europe/Zurich timezone

CLIC Collaboration working meeting addressing the 2012-16 workpackages

from Thursday, 3 November 2011 at 09:00 to Friday, 4 November 2011 at 18:00 (Europe/Zurich)
at CERN (Multiple rooms)

Manage ▾

Go to day ▾

Thursday, 3 November 2011

09:00 - 10:00 Work-package planning plenary session

Location: Council Chamber

Material: [CLIC Workpackages and responsables](#)

10:00 - 12:30

Implementation Studies

- Civil Engineering & Services (IS-CES)

- Project Implementation Studies (IS-PIP)

Convener: Philippe Lebrun (CERN)

Location: 18-3-030

Material: [Collaboration data needed](#) [Workpackages](#)

10:00 **Civil Engineering & Services** 30'

- Followed by discussion of/with potential partners

Speaker: John Andrew Osborne (CERN)

10:45 **Project Implementation studies** 30'

- Followed by discussion of/with potential partners

Speaker: Philippe Lebrun (CERN)

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<https://indico.cern.ch/conferenceDisplay.py?confId=156004>

There will be a series of individual discussions concerning the following workpackages, followed by a common working session at the end:

- Damping Rings Superconducting Wiggler (CTC-WIG)
- Survey & Alignment (CTC-SUR)
- Quadrupole stability (CTC-QUA)
- Two-Beam module development (CTC-TBM)
- Warm Magnet Prototypes (CTC-WPM)
- Beam Instrumentation (CTC-BDI)
- Post-collision line & dumps (CTC-PCLD)
- Controls (CTC-CG)
- RF Systems (1GHz klystrons & DB cavities, DR RF) (CTC-RF)
- Powering (Modulators, magnets converters) (CTC-EPC)
- Vacuum Systems (CTC-VAC)
- Magnetic stray Fields Measurements (CTC-MM)
- Beam Transport Equipment (CTC-BT)
- Creation of a "Technology Center at CERN" (CTC-MME)

Convener: Dr. Hermann Schmickler (CERN)

Location: 40/S2-D01

Material:

Collaboration data needed

Work Packages

10:00 Introduction and organisation 10'

Speaker: Dr. Hermann Schmickler (CERN)

10:10 General - JINR Activities concerning ILC & CLIC 15' ()

Speakers: Grigori Shirkov (JINR), Andrey Dudarev (Joint Inst. for Nuclear Research (RU))

10:25 IFIC: Beam Instrumentation 15'

Speaker: Angeles Faus-Golfe (Instituto de Fisica Corpuscular (IFIC) UV-CSIC)

10:40 RHUL: Beam Instrumentation 15'

Speaker: Grahame Blair (Physics Department-Royal Holloway College-University of London)

10:55 USCS/SCIPP & LBNL - Beam Instrumentation - R&D on Detectors for beam monitoring 15'

Speaker: Marco Battaglia (Lawrence Berkeley National Lab. (US))

11:10 LAPP - TBM acquisition system 15'

Speaker: Sebastien Vilaite (LAPP)

11:25 Greece: Survey - TBM - beam instrumentation 15'

Speaker: Evangelos Gazis (National Technical Univ. of Athens (GR))

11:40 DESY: Survey 15'

Speaker: Dr. Riemann S.

11:55 DUBNA-JINR: TBM 15'

Speaker: Alexander Karlov

12:10 ACAS - TBM 15'

Speaker: Dr. Roger Rassoul (ACAS)

12:25 HIP: TBM 15'

Speaker: Kenneth Osterberg (University of Helsinki)

12:40 CIEMAT: Survey - TBM 15'

Speaker: Dr. Fernando Toral (Centro de Investigaciones Energ. Medioambientales y Tech. - (ES))

12:55 LUNCH BREAK 1h30'

14:25 Dubna-JINR: Survey - New concepts in the High Precision Large Distance Laser Metrology 15'

Speaker: Mikhail Lyablin (Joint Institute for Nuclear Research (JINR))

14:25 SYMME: quadrupole stabilisation 15'

Speaker: B. Caron

14:40 NCP - TBM - Design integration and tooling development 15'

Speaker: Azhar Nawaz (Quaid-i-Azam University (PK))

Material: 

14:40 LAPP: quadrupole stabilisation 15'

Speaker: Andrea Jeremie (Centre National de la Recherche Scientifique (FR))

14:55 RRCAT: TBM 15'

Speaker: Dr. P. Shrivastava

15:10 UPPSALA Un.: TBM 15'

Speaker: Volker Ziemann

15:25 COFFEE BREAK 20'

15:45 Wrap-up 2h0' (BR-012)

Speakers: Dr. Hermann Schmickler (CERN), Dr. Germana Riddone (CERN)

- Presentation of the activities and work packages:
 - Integrated Beamline Design and Parameters (CD-IBD)
 - Integrated Modelling and Performance Studies (CD-IMS)
 - Feedback Design (CD-LAB)
 - Machine Positioner & Operational Database (CD-OP)
 - Background (CD-CKG)
 - Polarisation (CD-PC)
 - Main-beam electron source (CD-EDRC)
 - Main-beam positron source (CD-PRDC)
 - Damping Rings (CD-DR)
 - Ring-to-Ring-Links (CD-RTL)
 - Main-Linear Two-Beam Accelerator (CD-ML)
 - Beam-Deflection System (CD-BDS)
 - Machine Detector-Interface activities (CD-MDI)
 - Drive-Beam Complex (CD-DRC)

Presentations from the collaborating institutes:

- The ILC online
- Information needed about ILC and document
- Typical 3-7 min presentation and 3-2 min discussion

Convener: Daniel Schulte (CERN)

Location: 9-2-305

Material:

Collaboration data needed

Work packages

18:00 Introduction 10'

Speaker: Daniel Schulte (CERN)

18:15 Work-package overview and question/answers concerning the workpackages 10'

Speaker: Daniel Schulte (CERN)

18:20 LAL - BDS Final Focus System and tests in ATF2 10'

Speaker: Philip Bambade (Laboratoire de Physique des Hautes Energies (LAL) (CNRS) (FR))

18:30 Low emittance tuning simulation for CLIC Damping Rings 10'

Speaker: Kent Bradler (Australian Synchrotron)

18:35 IFIC - BDS Collimation system and collimator tests 10'

Speaker: Javier Ferris Lopez (IFIC, Valencia University)

18:35 Oxford - IP feedback 10'

Speaker: Prof. Philip Barker (University of Oxford)

18:40 BNL - BDS optics, background and emittance measurement 10'

Speaker: Guillaume Blaz (Royal Holloway, Univ. of London)

18:50 SLAC/LBL - Code development, electron tracking and beam-beam interaction 10'

Speaker: Barbara Colson (SLAC)

19:00 UPC - PPS and emittance measurement 10'

Speaker: Eduardo Marin Garcia (Universidad Politecnica Cataluna (UPC))

19:10 Uppsala 10'

Speaker: Volker Ziemann (Uppsala University (SE))

19:20 INFN - Drive beam combination and turn around studies 10'

Speaker: Caterina Stewart (Istituto Nazionale Fisica Nucleare (INFN))

19:30 Luncheon 1h30'

19:00 INEP - Linear beam dynamics 10'

Speaker: Ju GAO (INEP)

19:10 Canadian light source - Risk assessment and management 10'

Speaker: Sigrid Wagner

19:20 ANKA - Drive beam and background 10'

Speaker: Axel Huebl (University of Adana (TR))

19:30 DESY/Zeuthen - BDS polarisation 10'

Speaker: Sabine Benner (DESY)

19:40 LAL - Positron sources 10'

Speaker: Dr. Alessandro Vartoli (LAL)

19:40 Navajo 10'

Speaker: Bernard Caron (Mc Master)

19:00 Optics design and measurements at DIAMOND 10'

Speaker: Riccardo Serbelloni (Diamond Light Source and John Adams Institute)

19:10 Rutherford contribution to CLIC DR design 10'

Speaker: Konstantin Zolotarev (Rutherford)

19:20 Kicker design and impedance 10'

Speaker: Carolina Belser Aguilar (EPAC)

19:30 Coffee break 30'

19:00 Reaching and measuring ultra-low vertical emittances: The TIARA collaboration 10'

Speaker: Tracy Gurvey (Paul Scherrer Institut)

19:10 Superconducting wiggler design and experiments in ANKA 10'

Speaker: Axel Berthel (Karlsruhe Institute of Technology)

19:20 Experiments at CESRFA 10'

Speaker: Dr. Mark Palmer (Central University, CLASSIC)

19:30 SLAC contribution to CLIC beam dynamics 10'

Speaker: Rainer Fu (Stanford Univ. Slac @ Torino)

19:40 Preparation for the plenary 10'

X-band Test activities

Introduction about the activities:

- X-band RF structure Design (RF-DESIGN)
- X-band RF structure Production (PRODUCTION)
- X-band RF structure High Power Testing (TESTING)
- Creation and Operation of X-band High power Testing Facilities (TEST AREAS)
- Basic High-Gradient R&D (HIGH-GRADIENT)

Presentations from the collaborating institutes

- See list below
- Information needed shown in linked document
- Typically 5-7 min presentation and 5-3 min discussion

Convener: Walter Wuensch (CERN)

Location: [160-1-009](#)

Material:

[Collaboration data needed](#)

[Workpackages](#)

- 10:00 **Introduction to X-band activity 30'**
Speaker: Walter Wuensch (CERN)
- 10:30 **IFIC, Valencia - Test infrastructure 10'**
Speaker: Silvia Verdu Andres (IFIC (CSIC-UV) (SP))
- 10:40 **IRFU, Saclay - Test infrastructure, testing, production 10'**
Speaker: Mr. Franck Peauger (CEA / DAPNIA / SACM)
- 10:50 **KEK - Test infrastructure, testing, production 10'**
Speaker: Walter Wuensch (CERN)
- 11:00 **Sincrotrone Trieste - Test infrastructure, production 10'**
Speaker: Dr. Gerardo D'Auria (Elettra Trieste)
- 11:10 **Uppsala - Test infrastructure, testing, high-gradient R&D**
Speaker: Volker Ziemann (Uppsala University (SE))
- 11:20 **PSI - testing, production, rf design 10'**
Speaker: Terry Garvey (Paul Scherrer Institut)
- 11:30 **SLAC - Test infrastructure, testing 10'**
Speaker: Steffen Doebert (CERN)
- 11:40 **Lancaster - rf design, production 10'**
Speaker: Amos Dexter (Lancaster University)
- 11:50 **Tsinghua - rf design, production 10'**
Speaker: Jiaru Shi
- 12:00 **Manchester - rf design, production 10'**
Speaker: Dr. Alessandro D'Elia (University of Manchester (GB))
- 12:10 **Oslo - rf design 10'**
Speaker: Erik Adli (University of Oslo (NO))
- 12:20 **CIEMAT - production 10'**
Speaker: Dr. Fernando Toral (Centro de Investigaciones Energ. Medi)
- 12:30 **HIP - Production, high-gradient R&D 10'**
Speaker: Kenneth Osterberg (University of Helsinki)
- 12:40 **JINR - Engineering Design 10'**
Speaker: Alexander Karlov
- 12:50 **IHEP - Production 10'**
Speaker: Jie GAO (IHEP)
- 13:00 **Vigo University - Production 20'**

Experimental verification

There will a general description of the activities and work-packages:

- CTF3 Consolidation & Upgrades (CTF3-001)
- Drive Beam phase feed-forward and feedbacks (CTF3-002)
- TBL+, X-band high power RF production & structure testing (CTF3-003)
- Two-Beam module string, test with beam (CTF3-004)
- CLIC 0 drive-beam front end facility (including Photoinjector option) (CLIC0-001)
- Drive Beam Photo Injector (CLIC0-002)
- Accelerator Beam Systems Tests (ATF, Damping Rings, FACET, etc.) (BTS-001)
- Sources Beam System Tests (BTS-002)

After each work-package there will presentations from the collaborating institutes

- Information needed shown in linked document
- Typically 5-7 min presentation and 5-3 min discussion

Convener: Roberto Corsini (CERN)

Location: [160-1-009](#)

Material:

[Collaboration data needed](#)

[Work-packages](#)

- 14:00 **Introduction, goal of the session 5'**
Speaker: Roberto Corsini (CERN)
- 14:05 **CTF3-001, CTF3 Consolidation & Upgrades 10'**
Speaker: Frank Tecker (CERN)
- 14:15 **CTF3-002, Drive Beam phase feed-forward 10'**
Speaker: Piotr Krzysztof Skowronski (CERN)
- 14:25 **INFN-Frascati, contributions to CTF3-002 20'**
Speaker: Andrea Ghigo (INFN-LNF)
- 14:45 **JAI-Oxford U., contributions to CTF3-002 10'**
Speaker: Prof. Philip Burrows (University of Oxford)
- 14:55 **Round table, potential contributions to CTF3-001, CTF3-002 & wrap-up 10'**
- 15:15 **Break 20'**
- 15:35 **CTF3-003, TBL+ X-band power production & structure testing 10'**
Speaker: Steffen Doebert (CERN)
- 15:45 **CTF3-004, Two-beam module beam tests 10'**
Speaker: Roberto Corsini (CERN)
- 15:55 **Uppsala, contributions to CTF3-004 10'**
Speakers: Roger Ruber (University of Uppsala), Volker Ziemann
- 16:05 **CLIC0-001 & CLIC0-002, Drive Beam Front-End facility (including photoinjector option) 15'**
Speaker: Steffen Doebert (CERN)
- 16:20 **CIEMAT, contributions to CTF3-003, CTF3-004 and CLIC0-001 15'**
Speaker: Dr. Fernando Toral (Centro de Investigaciones Energ. Medioambientales)
- 16:35 **IFIC, contributions to CTF3-004 and CLIC0-001 15'**
Speaker: Angeles Faus-Golfe (Instituto de Fisica Corpuscular (IFIC) UV-CSIC)
- 16:50 **Polytech. Univ. of Catalunya, contributions to CTF3-004 and CLIC0-001 15'**
Speaker: Mr. gabriel montoro (universitat politcnica de catalunya)
- 17:05 **IPM Teheran, contributions to CTF3-001 and CLIC0-001 10'**
Speaker: Roberto Corsini (CERN)
- 17:15 **Round table, potential contributions to CTF3-003, CTF3-, CLIC0-001 & CLIC0-002 10'**

Friday, 4 November 2011

09:00 - 09:10	Welcome and introduction 10' (BE Auditorium Meyrin) Speaker: Ken Peach (University of Oxford (GB))	▼
09:15 - 09:35	Summary of the "Parameters and Design" activities 20' (BE Auditorium Meyrin) Speaker: Daniel Schulte (CERN)	▼
09:45 - 10:05	Summary of the "Experimental Verification" activities 20' (BE Auditorium Meyrin) Speaker: Roberto Corsini (CERN)	▼
10:15 - 10:35	Summary of the "Technical Developments" activities 20' (BE Auditorium Meyrin) Speaker: Dr. Hermann Schmickler (CERN)	▼
10:45 - 11:10	Coffee Break ()	
11:10 - 11:30	Summary of the "X-band technologies" activities 20' (BE Auditorium Meyrin) Speaker: Walter Wuensch (CERN)	▼
11:40 - 12:00	Summary of the "Implementation studies" activities 20' (BE Auditorium Meyrin) Speaker: Philippe Lebrun (CERN)	▼
12:10 - 12:30	Final summary, next steps, AOB 20' (BE Auditorium Meyrin) Speaker: Steinar Stapnes (CERN)	▼

14thCLIC/CTF3 Collaboration Board

chaired by Ken Peach (JAI)

Friday, November 4, 2011 from 13:30 to 16:30 (Europe/Zurich)
at CERN (To be defined)

Description

Participants P. D. Gupta; Kenneth Osterberg; Lenny Rivkin; Purushottam Shrivastava

Registration Want to participate? [Apply here](#)

Friday, November 4, 2011

13:30 - 13:35	Introduction by chairman 5' Speaker: Ken Peach (University of Oxford (GB))
13:35 - 13:40	Approval of minutes of previous meeting 5' Speaker: Ken Peach (University of Oxford (GB))
13:40 - 13:45	Matters arising 5' Speaker: Ken Peach (University of Oxford (GB))
13:45 - 14:15	Discussion on the CCB chair mandate, re-launch of CCB chair election procedure 30'
14:15 - 14:45	Update on the future LC organization 30' Speaker: Steinar Stapnes (CERN)
14:45 - 15:45	WPs: summary of workshop, future plans and "Tour de Table" 1h0'
15:45 - 16:15	Status of the CDR 30' Speakers: Dr. Hermann Schmickler (CERN), Lucie Linssen (CERN)
16:15 - 16:30	AOB 15'