



## Introduction to the session

	Old Name	New Name	Name	WP Holder	Note
<b>General</b>	CLIC-001		CLIC General	S. Stapnes	
<b>Parameters and design</b> 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.Gatignou B. Jeanneret	Searching (S.Doebert interim contact point)  ABP request 2013 (also linked to CTF3 activities)  ABP request 2014 - (also linked to CTF3 activities)
<b>Experimental verification</b> 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 ?
<b>Technical Developments</b> 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 an "In-House" TBA Production Facility	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 (placeholder)	BI request 2012  RF request 2014?
<b>X-band Technologies</b> Walter Wuensch	RF-DESIGN RF-XPROD RF-XTENDING RF-XTSTFAC 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. Syratychev G.Riddone S.Doebert E.Jensen (placeholder) S.Calatroni	RF request 2012, move construction to Technical Developments when defined
<b>Implementation studies</b> Philippe Lebrun		IS-CES IS-PIP	Civil Engineering & Services Project Implementation Studies	J. Osborne P.Lebrun	





# Experimental Verification

- Present experimental program of CTF3 (feasibility issues)  
⇒ completed by **end 2012**

Goals for (2011-2016):

- Consolidation/upgrade of CTF3 to **fully exploit its potential:**

- Verify **stability/reliability performance** in view of CLIC requirements, improve operational experience
- Contribute to **high-power RF testing**, demonstrate **operation of a drive -beam driven power source**
- Test with beam CLIC **two-beam modules**

**CTF3-001, CTF3-002, CTF3-003 & CTF3-004**

- New drive beam injector facility, at nominal CLIC parameters

- Final proof of drive beam performances, **long-pulse, high -power operation**
- provides a **focus for development and pre-industrialization of drive beam components** – all hardware reusable
- **First step towards CLIC Zero**, facility for....

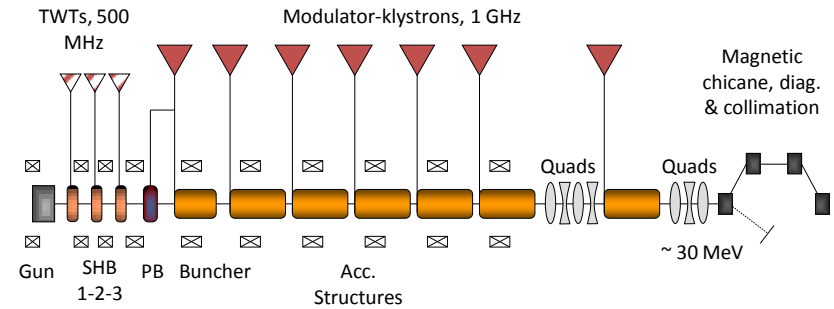
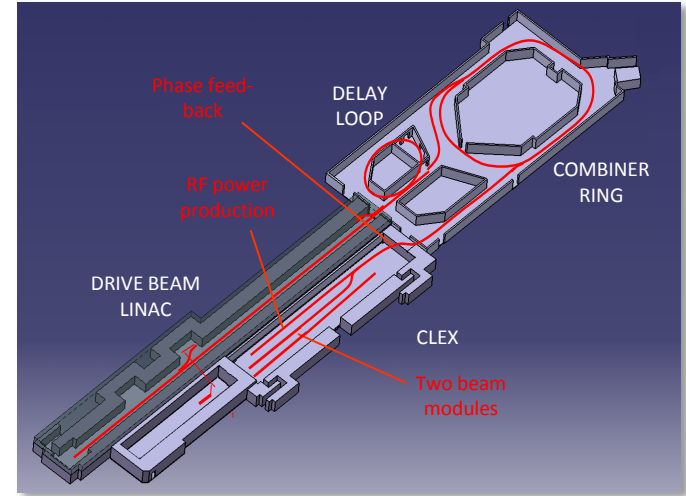
**CLIC0-001 and CLIC0-002**

- Pursue and intensify **experimental program in other facilities**

- ATF II
- CesR-TA, SLS, ATF I, ANKA...
- Facet, Asset
- ...

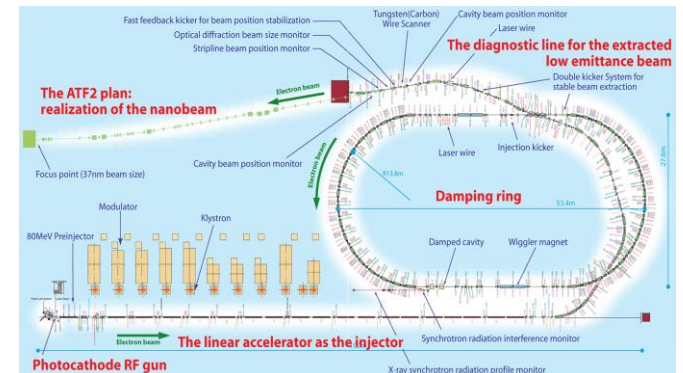
**BTS-001 and BTS-002**

CTF3+



CLIC Drive Beam injector schematic layout

ATF - KEK





## Format of the session

1. *Short Introduction to the Meeting: schedule, expected outcome*
2. Presentation of work-packages by WP holders (3-4 slides). Technical description, rough schedule, resources (10 – 15 min each)
3. Each presentation will be followed by statements by collaborators about their planned/potential contributions and discussion on practical details (about 15 – 20 min each)
4. Final wrap-up, collecting all informations

N.B.: Some WPs have common aspects/overlap with other activities' work-packages. Main examples:

- CLICo-001 (CLIC Zero Front-end), with CTC-012 & CTC-014
- CTF3-004 (Modules in CTF3) with CTC-004
- ...





## Aim of the session

1. Collect all available info on contribution from collaborators to the CLIC work program 2012-2016
  - Ongoing activities
  - Planned and funded contributions
  - Potential contributions
2. For each Institute and each work-package, if possible review and collect in excel-sheet format the information, including *existing and potential* resources
3. Such information will enable the CLIC study to review the work program, and
  - Streamline, prioritize or delay part of the program if too many resources are missing or the interest within the collaboration for some parts is not strong enough
  - Negotiate with the CERN management (Departments and Groups) the detailed resources needed for the next phase, to complement the outside effort
4. The meeting will also help to better focus the technical details of the program

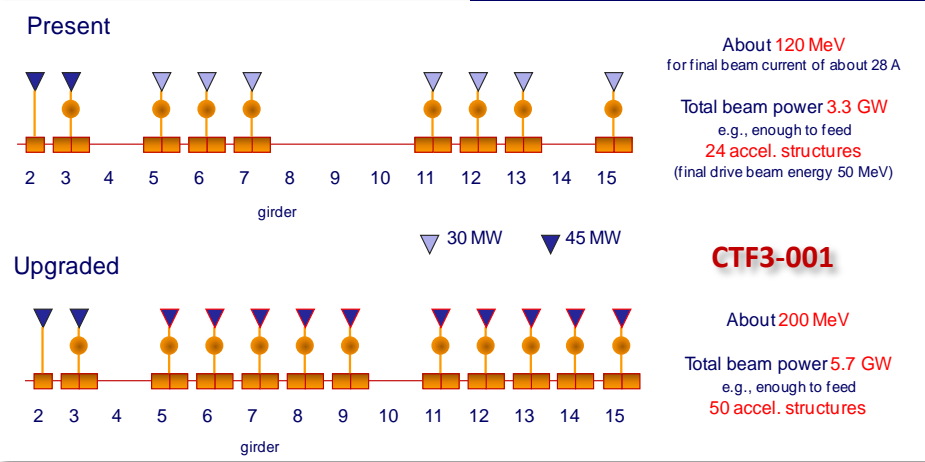
*The collected information will of course be not complete – a detailed follow-up will be done with all collaborators, especially at the work-package level*





# Test facilities – CTF3+

- CTF3 consolidation and upgrade**
- Consolidation and upgrade (higher energy, stability, reliability, rep. rate)
  - Drive beam phase feed-forward experiments
  - Upgrade and operate TBL as 12 GHz power production facility
  - Operation with beam of a long string of CLIC two-beam modules



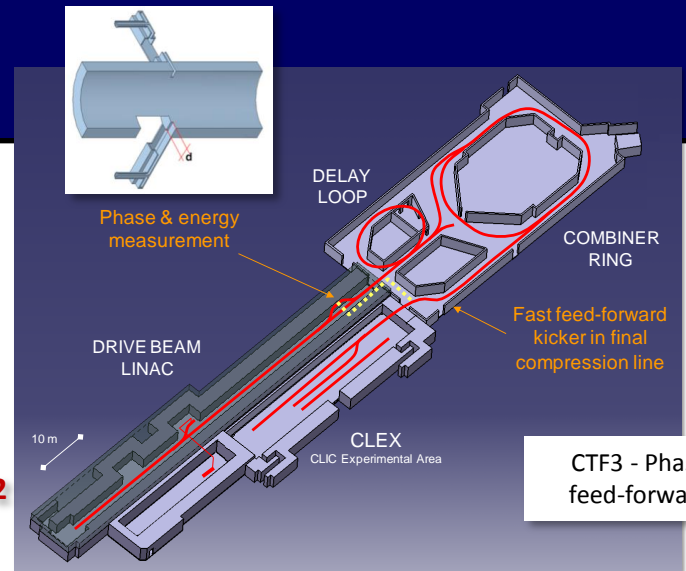
CTF3 consolidation and upgrade



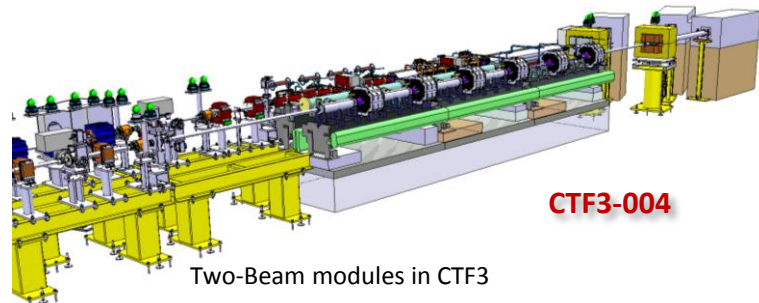
TBL - CLEX

**CTF3-003**

**CTF3-002**



**CTF3 - Phase feed-forward**



**CTF3-004**

Two-Beam modules in CTF3

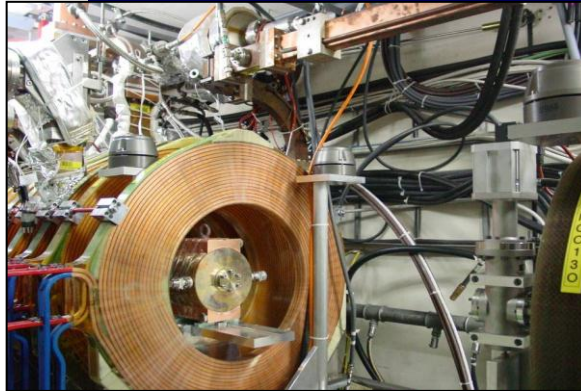




# CLIC Drive Beam Front-end

Build and commission 30 MeV Drive Beam front-end with nominal CLIC parameters

- Build and commission 30 MeV Drive Beam injector with nominal CLIC parameters
- Build and commission a few Drive Beam accelerator nominal modules
- Contribution to Technical Design of full CLIC Zero facility



CTF3 Injector

**CLIC0-001 and CLIC0-002**

