

## CLIC project 2012



The Conceptual Design Report for CLIC completed – presented in SPC, ECFA and numerous meetings and conferences, also providing basis for input to the European Strategy discussions

Volume 1: The CLIC accelerator studies (<a href="https://edms.cern.ch/document/1234244/">https://edms.cern.ch/document/1234244/</a>)

 Feasibility studies and Performance studies for the accelerator implementation; demonstrations of drive beam performance, two beam acceleration, breakdown and gradient of RF components, luminosity performance (emittances, alignment and stability), CE and site



### Dear all,

In order to get a printed copy of the report ""A Multi-TeV Linear Collider based on CLIC technology" (CERN report 2012-007), I remind you that you should fill in, <a href="mailto:before 20 December">before 20 December</a>, the form available here: <a href="https://indico.cern.ch/confRegistrationFormDisplay.py/display?confId=206903">https://indico.cern.ch/confRegistrationFormDisplay.py/display?confId=206903</a><br/>With kind regards,

#### Alexia

including timelines, schedules, a complete costing, power estimates and describing a possible staged implementation



#### 2013:

Workplan for 2012-2016 well underway – most activities started. **CLIC workshop in January important.** Resource situation:

- 2012-2013 as foreseen in 2011 when planning started
- Pressure at CERN from LHC (ultimately higher priority) and other ideas (priorities not always defined), difficulties for both material and personnel
- For collaborators also difficult in many cases to find local support to participate in a satisfactory way
- Important to have continued R&D support in European Strategy
- Important to continue to build collaborations between groups inside the CLIC project and towards users of similar technologies



## **Collaborators:**



### Signed new members:

The Hebrew University-Jerusalem (Israel-new) Vinca Institute Belgrade (Serbia)

### In preparation:

Tartu (Estonia-new), Alba (Spain), Sandia National Lab (US), METAS (Switzerland)

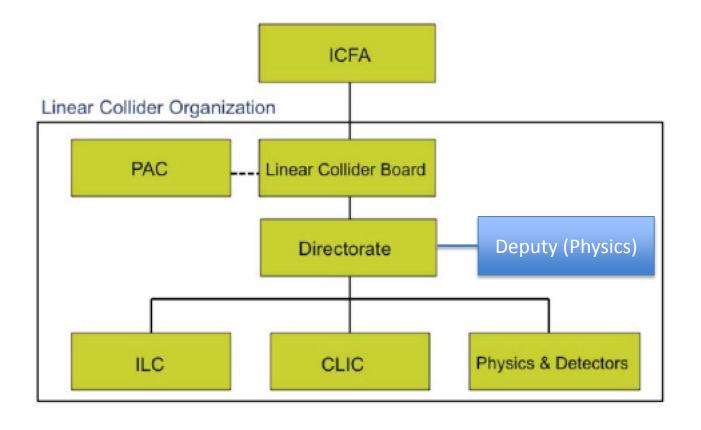
KVI Groeningen (the Netherlands) – not clear

Numerous updates and changes ....



# LC organisation





LCB European Members confirmed in PECFA – CERN DG, Dubna DG, DESY ReDir, LeDiberder and Rivkin Detector and Physics not converged



# Future LC objectives



- Strongly support the Japanese initiative to construct a linear collider as a staged project in Japan
- Prepare CLIC machine and detectors as an option for a future high-energy linear collider at CERN
- Further improve collaboration between CLIC and ILC machine experts
- Move towards a "more normal" structure of collaboration in the detector community to prepare for the construction of two high-performance detectors
- Question: Can this work (physics, resources, timescales, community, as roadmap) and be done coherently?



## LC common studies



Many common problems and solutions even though the basic core acceleration methods differ, and the parameters to be achieved by the systems below differ – in some cases leading to different solutions

Sources Beam dynamics (common Machine Beam delivery Physics and (covers along working group Damping rings Detector detectors systems entire machine) on positron Interfaces generation)

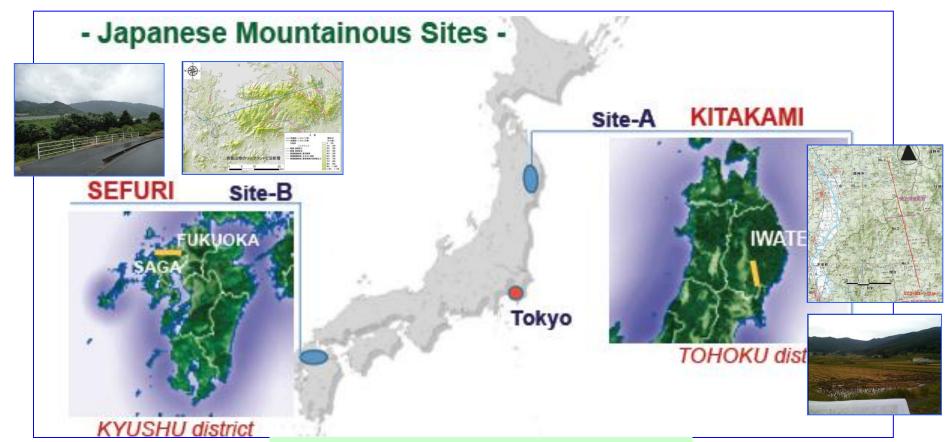
In addition common working groups on: Cost and Schedule, Civil Engineering and Conventional Facilities – and a General Issues Working Group

### Three general actions:

- Move (for some of these groups) towards more genuine combined working group in order to optimize resources and maximize exchange of experiences
- Further development of common work in the area of Detector and Physics
- Increased help across the borders of ILC/CLIC wrt implementation planning for the two projects – inside a common overall organization



# Japanese Sites



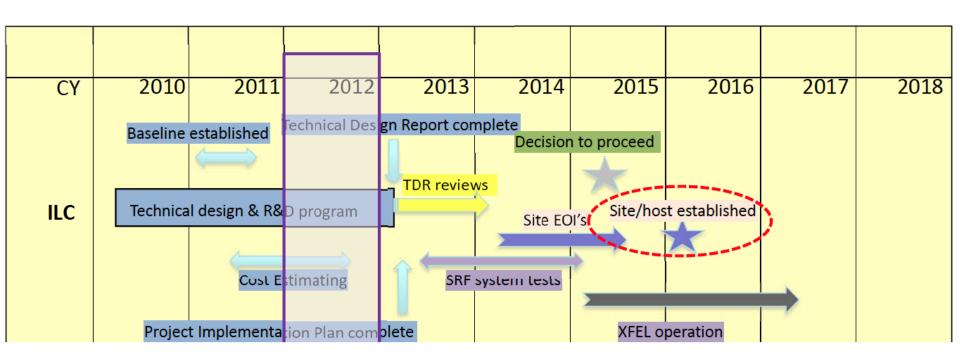


- GDE-CFS group visited two sites, Oct., 2011.
- GDE EC visit in Jan. 2012.





## **A.** Suzuki – IEEE 11/12





## Y. Okada - CPM12 Fermilab

## ILC Plan in Japan

## (After the discovery of a Higgs-like particle)

- Japanese HEP community proposes to host ILC based on the "staging scenario" to the Japanese Government.
  - ILC starts as a 250GeV Higgs factory, and will evolve to a 500GeV machine.
  - Technical extendability to 1TeV is to be preserved.
- It is assumed that one half of the cost of the 500GeV machine is to be covered by Japanese Government. However, the share has to be referred to inter-governmental negotiation.

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