

# **CLIC Design Dynamics**

## *Recent Progress*

- Very good progress on accelerating and decelerating structure design in close collaboration with beam dynamics.
- Very good progress on damping ring.
- First experience with fully loaded drive beam acceleration promising.
- Publication of CLIC physics report

## *Stagnation*

- 30 GHz high power data (power source gap between CTF2 and CTF3)
- BDS (but good news: visitor from Japan just started to work on this)
- The area between DR to 30 GHz linac with bunch compressors and pre-accelerators remains somewhat obscure.

*Other parts like main linac beam transport and drive beam generation and deceleration are in relatively good health for some time already*

## Some open issues for the new parameters

- Long range wake field of HDS
- Bunch spacing of  $7 \lambda$  corresponds to 4.29 GHz.  
What are the implications for damping ring, 9 GeV pre-accelerators and crab cavities ?  
4.29 GHz is not a subharmonic of the drive beam bunch frequency !
- Positrons and electrons simultaneously in each linac.  
Do we want this for the baseline design ?
- We have neither an integrated simulation DR to IP yet (foreseen in the framework of EUROTeV) nor simulations of DR, DR to Linac and BDS with imperfections. Therefore emittance growth values for some parts are just guesses.
- The substantially reduced pulse length cannot easily be made with CTF3 because of the delay loop length. How does this affect the validity of the CTF3 tests. Can/Should CTF3 be modified to adapt to the new pulse length ?