

CERN

ACTIVITIES

• CTF3 beam commissioning:

- Running-in of <u>sub-systems hardware</u> (injector, linac, chicane, DL, TL1, CR, TL2, TBL, probe beam, two-beam stand and other CLEX lines...)
- Obtain <u>beam performances</u> (current, energy, pulse length, energy spread, bunch length, emittance...)
- Perform <u>beam studies to validate CLIC power source design</u> (transverse and longitudinal stability, machine protection, feed-backs and stabilization...)
- Ensure integration of different sub-systems in terms of optics/beam dynamics, maintain documentation and modeling, define diagnostics and procedures...

• 30 GHz power production:

- <u>Setting-up of beams</u> with required performances (current, bunch length, emittance, stability) both in the linac test stand & in CLEX
- Ensure long-term operation of the CTF3 power stations
- Beam studies to improve performance as needed



CERN

OVERALL ORGANIZATION

• CTF3 beam commissioning:

Performed by an expert core team*, with help from:

- Collaborating institutes (INFN/LNF, Uppsala, DAPNIA...)
- Hardware experts
- General services
- 30 GHz power production:
 - Setting-up, performances and supervision provided by the expert core team
 - Operation for the moment done by dedicated operators from collaborating institutes (Ankara) and CERN
 - Longer term: power production in automatic mode with supervision from CCC

* NB: in the past years, there were typically less than 15 weeks of operation per year. From 2006, about 40 weeks/year are foreseen. Taking into account as well the increased complexity of the installation, strengthening the present team (4 people) is mandatory.





PEOPLE & RESPONSIBILITIES

- Frank Tecker
 - Operational aspects (patrols/access, interlocks, operation software, timing...)
 - Link with OP, CO
 - Online MAD modeling
 - Optics integration for TL1 and CR
 - Automatic power production operation
- Steffen Döbert
 - Beams for power production (performance & operation supervision)
 - Link with radiation protection
 - TBL design and integration
 - Integration of new photocathode gun
 - Integration of two-beam test stand
- Hans Braun
 - Emittance measurement software
 - Integration of TL2
 - Integration of probe beam





PEOPLE & RESPONSIBILITIES (cont'd)

- Peter Urschütz
 - Injector & SHB system simulations
 - Emittance optimization & transverse optics studies
 - Parameter list
 - Maintain automatic beam steering system
- Piotr Skowronski
 - Online modeling, transfer to MAD-X and maintenance
- Jean-Michel Nonglaton
 - Operation software