CLIC rf structure
Supply the power, gradient and wakefield

W. Wuensch
CLIC meeting
27-4-2006
Activities

• Theory: concepts, computation, beam dynamics interface, designs, parameters, CLIC design, breakdown physics and prototypes of the high-frequency rf chain (PETS, waveguide components, accelerating structures).
• Experiment: establish, build and execute a high-power rf experimental program to understand physical limits to gradient, test technologies and demonstrate performances. Produce rf hardware, diagnostics, acquisition hardware and software etc. for test stands. Make specialized experiments: dc spark, laser fatigue and ultrasound. Collaborative experiments with SLAC (KEK?).
• Technology: fabrication, metallurgy, surface treatment and metrology for PETS, waveguide components and accelerating structures.
• Stand-alone power sources
• Low-frequency CLIC: MBK, pulse compression
• Computation: Central electromagnetic computational expertise for CERN, computation and training for the LHC
• Collaborations: HIP and Finnish Industrial network, CIEMAT, Uppsala, Turkey, SLAC, US High gradient collaboration, KEK, Dubna.
People
Claude Achard: Mechanical design, fabrication coordination and installation of the rf components and test areas. Interface to many services such as central workshop, support staff, cleaning, welding etc. Must deal with crazy ideas of many of the people who follow. Brazing artist.
Samuli Heikkinen: PhD student, thesis on fatigue. Ultrasonic fatigue experiment. 3-d fabrication modeling support. Industrial contact man (often Finnish!).
Alberto Rodriguez: high power testing and rf breakdown experiments, test stand hardware and software. Endless hours in the control room…
Raquel Fandos: rf measurements and associated HFSS simulations, rf electronics system for test stand and high speed data acquisition system. Calibration!
Igor Syrachev: CLIC and experimental PETS and waveguide systems. Pulse compression. HEMBA. Too many CLIC ideas and parameters.
Frank Perret: machining and assembly

On vacation (Frank I mean)
Alexej Dubrovskij: rf conditioning software. Mathematician in a world of accelerators.
Steffen Döbert: high power testing and rf breakdown experiments, CTF3 interface, X-band testing
Jonathan Sladen (on right): rf diagnostics for test stand and high speed data acquisition system
Mauro Taborelli: TS/MME coordination, surface physics, materials, machining, metrology
Erk Jensen: Stand-alone power source, electromagnetic computation especially at level of CERN installations, HFSS/ANSYS. 3 GHz pulsed surface heating cavity.
Sergio Calatroni: dc spark and laser pulsed surface heating experiments. Surface physics and materials
Trond Ramsvik: Mr. dc spark
Holger Neupert: laser fatigue experiment
Steffano Sgoba: Metallurgy and material processing
Pedro Costa Pinto: vacuum calculations
Jukka Paro: Visitor from HIP/Finnish Industrial network, high-precision 3-d machining
Öznur Mete: Visitor from Turkey. CTF3 operation and rf conditioning
Zafer Nergiz: Visitor from Turkey. CTF3 operation and rf conditioning
David Manuel Carrillo Barrera: visitor from Ciemat. PETS computation and now also rf conditioning (sorry Igor)
Module working group

Alexej Grudiev
Bertrand Nicquevert
Carlo Wyss
Daniel Schulte
Helene Mainaud Durand
Igor Syrachev
Jean-Michele Lecroix
Mauro Taborelli
Noel Hilleret
Paulo Chiggiato
Pedro Costa Pinto
Rafael Leluxe
Walter Wuensch
Other activities

CLIC linear trek, 9-2005

CLIC ski day, 3-2006