

Beam Dynamics, EUROTeV and Alignment Teams

D. Schulte

Beam Dynamics Tasks

- Lattice design and modelling
 - Drive beam injector, accelerator, delay loop, combiner ring, turn-arounds, bunch compressor, decelerator
 - Main beam injector, damping ring, booster linac bunch compressor, turn-around, main linac, collimation system, final focus system, post collision line
 - CTF3 modelling
- Definition of alignment, feedback and tuning procedures
- Performance predictions
 - Emittance preservation, luminosity, input to background studies
- Instrumentation requirements
- Conceptual machine protection system
- Code development

Beam Dynamics Team

- Eric Adli
 - Will write his thesis on TBL
- Hans Braun
 - TL2
- Warner Bruns
 - Develops a new modular electron cloud code
- Helmut Burkhardt
 - Halo and tail generation (task reporter)
- Roberto Corsini
 - Defining needs for CTF3

- Peder Eliasson:
 - Luminosity/emittance optimisation with tuning bumps
 - Identification of tuning signals
 - Optimisation algorithm
 - Beam-based alignment
 - Feedback
- Maxim Korostelev
 - Alignment and tuning of the beam delivery system
- Andrea Latina
 - Improved feedback systems
 - Beam-based main linac alignment using the bunch compressor
 - PLACET support including parallelisation
- Lionel Neukermans
 - Halo and tail generation

- Louis Rinolfi
 - Main beam injector/drive beam injector
- Javier Resta Lopez:
 - Non-linear collimation system
- Giovanni Rumolo:
 - Collimator wakefields
 - TBL
- Daniel Schulte
 - Main beam dynamics
 - Drive beam dynamics
- Piotr Skowronski
 - CTF3 modelling, MAD-X development
- Frank Tecker
 - CTF3 modelling

- Rogelio Tomas Garcia:
 - Beam delivery system
 - Optimisation of the system
 - Alignment and tuning of the beam delivery system
 - Beamline design for CTF3
- Peter Urschütz
 - CTF3 injector simulations
- Frank Zimmermann:
 - Non-linear collimation system
 - ATF2
 - Electron cloud
 - Polarised positron source
- Lots of contacts...
 - E.g. Ted Wilson

EUROTeV Team

- Provide important diagnostics for CLIC
 - Wide band current monitor (WBCM)
 - High precision beam position monitor (PBPM)
 - Timing reference for phase stability (TPMON)
- Essentially all the above plus
- Alex Anderson
 - Timing reference with fs precision
- Gilbert Guignard
 - Administration
- Stephen Livesley
 - Timing reference with fs precision
- Salvatore Longo
 - High precision BPM
 - Wide band current monitor

- Ivan Podadera
 - High precision BPM
 - Wide band current monitor
- Francesco Ruggiero
 - Electron cloud
- Jonathan Sladen
 - Timing reference with fs precision
- Lars Soby
 - High precision BPM
 - Wide band current monitor
- Sebastian Thoulet
 - High precision BPM
 - Wide band current monitor

Alignment Team

- Alignment is in charge of TS SU
 - Helene Mainaud Durand
 - Vital for emittance preservation and luminosity achievement in CLIC

Some Collaborations

- Combiner rings
 - Frascati
- Main beam bunch compressor
 - PSI (EUROTeV)
- BDS improvement
 - Valencia, Saclay
- Post collision line
 - Uppsala (EUROTeV)
- EUROTeV
 - Model, algorithm and code benchmarking
- Stabilisation
 - LAPP (EUROTeV)