TE-MPE-PE: members of the section

- **Michael Jonker**
- **Mike Koratzinos**
- **Rüdiger Schmidt**
- **Daniel Wollmann – from 1st November 2011**
- **Arjan Verweij**
- Carlos Omar Maidana – Fellow starting the 2nd year on CLIC budget
- Emmanuele Ravaioli – Fellow in third year
- Sigrid Wagner – Fellow in second year
- Kajetan Fuchsberger - Fellow since April (…supervision by M.Zerlauth and R.Schmidt)
- Juan Blanco Sancho – PhD student in the 3rd year
- Scott Rowan – Technical Student from June
- Daniel Molnar – Technical Student from February (with Arjan)
- Michael Galetzka - Technical Student from September (with Kajetan)

Friends….

- Markus Zerlauth
- Andrea Appolonio - Technical Student from January in BE-OP

Agenda

- **Introduction and activities**
- **Offices**
- **Drink?**
- **Technical and doctoral students**
- **Conferences / IPAC 2012**
- **Workshop on CLIC MP**
- **Circuit screening**
- **Your contributions**

Nr	Circuits	Short description
1	All	Information library
2	All	Electrical integration drawings
3	All	Peak DC voltage check
4	All	E-model, transient voltage, effects of faults
5	All	Hot spot temperature
6	All	Ground insulation current monitor
7	All	Periodic automatic test of insulation
8	All	Protection resistors for V taps
9	All	In-situ test plan for circuit not tested to full load
10	All	Test simultaneously main and corrector circuits
11	RB	Diodes: qualaify desing or engineer repair solution
12	RB/RQ	Internal voids in T connection to diodes
13	RB/RQ	Improve splider insulation
14	RB/RQ	Consolidate main splices
15	MQ	Diodes: Requalify design of engineer better solution
16		
17	IT	Define repair plan
18	IT	Test & document splices
19	6kA	Quench studies
20	Cur Leads	Redundant temperature sensors in safety chain
21	Cur Leads	Top temperature sensors in safety chain
22	Cur Leads	Risk of electrical breakdownm du to He leaks
23	DFB	Repair 13kA splices OR prove them healthy
24	DFB	BBB deflection studies

Overview of our activities

Main themes

- LHC Machine Protection and operation related to beams
- LHC Machine Protection and operation related to magnet powering
- LHC understanding of the powering system
- LHC maximum energy – this task has been clearly given by Steve M. and CERN MAC
- Powering tests (“hardware commissioning”)
- CLIC Machine Protection related to beams
- ITER collaboration on machine protection (interlock systems)
- Other tasks: outreach, consultancy, community service, …

LHC related …

- No beam induced accident, no beam induced quench by the circulating beam
- MPPr (…and MPP) panels were established and work well
- No quenches due to electromagnetic waves for dipole circuits

Details....

- Involvement in **LHC machine operation and protection**
  - related to beam – MPP and MPPr (Kajetan, Mike, Juan)
  - related to powering (Arjan, Emmanuele, Mike, Daniel, Scott)
  - understanding quenches in presence of beam (Arjan)
- **Powering tests** (Mike, Kajetan, Michael G., Arjan, Andrea)
- **LHC maximum energy and issues with diodes**: Quench propagation, CSCM (thermal amplifier, Arjan, Mike, Daniel)
- **LHC orbit** nonconformities: studies for an **interlock** (Kajetan, Mike)
- **Modelling of LHC circuits** and comparison with experimental data (Emmanuele, Arjan, Daniel M., Scott)
- Preparation for **splice consolidation** during shutdown (Arjan, Daniel M.)
- **LHC hazard catalogue and dependability studies** (Sigrid, Andrea)
- **Collaboration** with **ITER** for machine protection (Michael J., Sigrid)
  - Prototyping the interlocks systems
  - RAMS studies for the LHC and ITER protection systems
- **HiRadMat** (Juan)
  - calculations and preparing an experiment for shock beam impact on matter
  - commissioning the HiRadMat beam line
- **CLIC** machine **protection** (Michael J. and Carlos)

Other activities

Mike Koratzinos, Michael Jonker. Rüdiger Schmidt, Juan Blanco

- Outreach and community service (presenting CERN to the public, teachers programme)

Rüdiger Schmidt

- CAS, Lecturing, DESY advisory committee, IPAC organising committee, presenting CERN to the public, German committee for accelerator physics

Michael Jonker

- Deputy RSO
  - Work on ALARA review working group.
  - RSSO discussions (Radiation Safety Support Officer)

Arjan Verweij

- TSC (Technical Student Committee), AFC (Associate + Fellows Committee) deputy for TE
- SIPB scientific info policy board for TE

Some info…

- LHC operation with ions until beginning of December
  - Now MDs
  - Then technical stop
  - Then ion operation
  - The Xmas stop

- Evian LHC operation workshop 12-14 December
- Chamonix LHC workshop 6-10 February 2011

- LHC operation starting in February with powering tests
- Beam operation in March

- Energy likely to be 4 TeV in 2012
- CSCM (thermal amplifier) tests: not yet clear, but certainly not for all machine in the Xmas Stop

Circuit screening

- Has been proposed to perform before LS1, to understand other consolidation needs
- Part of the work will be in our team
- To be discussed in detail later

What about RCO, and other non-conformities?

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