

PULSED POWER for KICKER SYSTEMS 2018 workshop

12–13 March 2018, CERN, Geneva, Switzerland

<https://indico.cern.ch/event/682148>



International Organising Committee:

Patrick Alexandre SOLEIL
Mike Barnes CERN
Marc Dubrulle ESRF
Olaf Dressler BESSY-II
Laurent Ducimetière CERN
Thomas Kramer CERN
Martin Paraliev PSI
Montse Pont ALBA
Jonny Ranner STFC
Piergiorgio Tosolini ELETTRA

Local Organisation Committee

Janne Holma (Technical Chair)
Lucie Mainoli (Local organisation)
Miroslav Georgiev Atanasov (Visit)
Christoph Wiesner (Visit)



Welcome to Geneva, to CERN, and to this Workshop

- A new event, aimed specifically at Pulsed Power for kickers
- This workshop aims to address topical issues address several topics associated with pulse power for kickers, as well as providing a forum for discussion between experts in this specialised domain.
- Organised under the auspices of ARIES (successor of EuCARD2). It is supported by CERN Future Circular Colliders study.



Ambitious objectives

- Improve lines of **communication** between both new and experienced Engineers in the field of pulsed power for particle accelerators;
- **Share** knowledge, experience and approaches to doing things;
- Share information about **projects** etc. which we are working on, including: obsolescence programs, upgrades, large procurements, new designs, R&D projects, etc.
- Discuss **future** requirements of the pulsed power community and define what we need from both universities and manufacturers.

Challenges

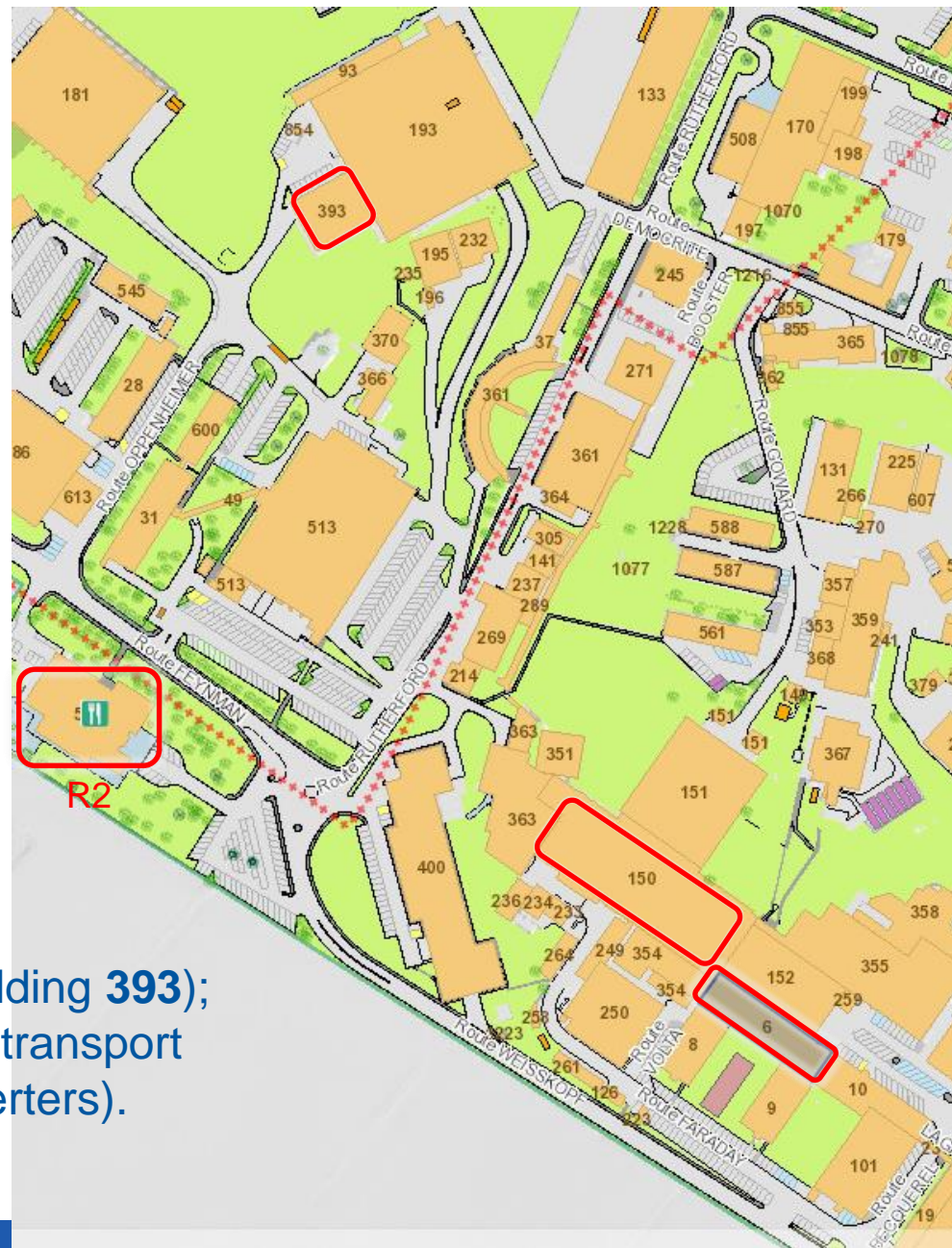
- Pulsed power for kickers is a small but fertile technical domain
- Presents many challenges: both to engineers and accelerators, including
 - Switch technology
 - High voltage
 - High current
 - Magnetic materials
 - Cables and connectors
 - Stability
 - Reliability
 - Radiation environments
 - Beam-coupling impedance
- Challenges are opportunities!
- Looking forward to an intense and fascinating few days together

Logistics - 1

- Coffee Breaks: outside this room;
- Lunch: Restaurant 2. Self-service (self-pay !). **Reserved table(s) for workshop;**
- Group photograph: TBD

Visit: meet at

- 9:00hrs in AD (in front of new building **393**);
- 10:00hrs in front of building **150** (transport entrance next to the power converters).



Logistics - 2



Workshop dinner (SMASH Restaurant, Chemin de la Berne 5, Meyrin)

Egroup / Mailing List

Egroup: *PULPOKS-participants@cern.ch*

- Self-subscription policy for this egroup (mailing list), with administrator approval.
- Subscriber can send questions or interesting information.
- Idea is similar to the “*POCPA-participants*” mailing list, e.g. to be able to also request unbiased information on commercial products.

Workshop Overview

	Session Title	Session Chair
Monday 12th March		
Welcome (20mins) - 8h30		
Introduction - 8h50 to 10h00 Volunteers: up to 3-4 min (1 slide/min) to introduce themselves & their labs, and interesting projects	Introduction (1hr10m)	
Coffee: 10:00 - 10:30		
Session 1 - 10h30 to 12h00	Valve switches (1h30m)	Laurent Ducimetiere
Lunch: 12:00 - 13:30		
Session 2 - 13h30 to 14h30	HV cables, connectors and feedthroughs (1hr)	Jonny Ranner
Session 3 - 14h30 to 15h00	Triggering (0.5hr)	Piergiorgio Tosolini
Coffee Break: 15:00 - 15:30		
Session 4 - 15h30 to 17h30	Pulsed measurements and online monitoring and analysis (2hr00m)	Etienne Carlier
Workshop Dinner - 19h30 - 22:00		
SMASH Restaurant		
Tuesday 13th March		
Session 5 - 8h30 to 11h30	Solid state switches and modulators (2hr30m)	Mike Barnes
Coffee Break: 10:10 - 10:40		
Session 6 - 11h30 to 11h55	Modelling software and simulation (50m)	Martin Paraliiev
Lunch: 11:55 - 13:20		
Session 7 - 13h45 to 15h55	Kicker Systems and Magnets Materials (1hr40m)	Montse Pont
Coffee Break: 15:00 - 15:30		
Session 8 - 15h55 to 16h45	Impedance shielding / Coatings (50m)	Marc Dubrulle
Wrap-up (15min) - 16h45 to 17h30 (can continue if some attendees are interested)		
Note: Circuit 4 - Meyrin - Airport Departs at 17:00hrs from Building 500 (~15mins to airport)		
Wednesday 14th March		
9:00hrs in AD (in front of the new building 393);		
10:00hrs in front of building 150 (transport entrance next to the power converters)		

I'm looking forward to an interesting workshop - with much discussion.

Thank you for your attention !