



LLRF05



First Announcement

Workshop on Low Level RF CERN, Geneva, 10-13 October 2005

Sophisticated Low Level RF systems are needed in modern particle accelerators to deal with the characteristics of state-of-the-art RF accelerating structures and their power sources, and to meet unprecedented levels of performance. The goal of the LLRF05 Workshop is to share experience between linac and synchrotron projects (SNS, J-PARC, ILC, LHC etc.) and to discuss the best engineering practice.

This four-day Workshop will be the 15th in the series of mini-workshops under the auspices of the ICFA Beam Dynamics Panel (<http://www-bd.fnal.gov/icfabd/>) and specifically will be the second in a series on low level RF techniques, initiated at Jefferson Lab, USA, in 2001 (<http://www.jlab.org/intralab/calendar/archive01/LLRF>).

1. Topics will include:

- A review of the LHC low-level RF system
- Design and operational experience on LLRF in recent projects: SNS, J-PARC, ILC, LEIR etc.
- RF beam control requirements: amplitude/phase stability.
- Pulse/CW operation, Linac/Synchrotrons, diagnostics, fault handling etc.
- RF hardware specific needs: SC/broad band resonators, tetrode/klystron/solid-state amplifiers etc.
- RF System Modelling: principles, tools etc.
- Hardware: architectural choices, noise reduction, compensation of amplifier imperfections, EMC and shielding, VME/direct Ethernet access, radiation, new concepts and trends for the future, reference and synchronization, equipment protection etc.
- Software: control and diagnostic algorithms, beam loading compensation, system diagnostics, development tools, new concepts and trends for the future etc.
- Operational procedures: RF turn-on, beam phase measurement, beam-based RF parameter optimization, fault handling etc.

2. Dates

The Workshop will begin on Monday 10th and will finish at lunchtime on Thursday 13th October. Visits to CERN installations will be proposed on Thursday afternoon.

3. Programme

The Workshop will comprise plenary sessions with invited talks, and parallel sessions for working groups on the Tuesday and Wednesday afternoons. Attendees are invited to propose contributions either in the form of posters, which will be displayed for two days, or short presentations, limited to two or three transparencies, to be given during the working group sessions. Four working groups are envisaged on the following themes:

- o Synchrotrons – with, in particular, a review of the proposed LHC low-level RF
- o Linacs
- o System modelling
- o Hardware

Talks will be immediately available on the web.

Although there will be no published proceedings a CD-ROM with all the material presented at the Workshop will be distributed to the registered participants.

4. Registration and practical details

Registration is on-line at the Workshop website

<http://cern.ch/LLRF05>

where information about the event will be frequently updated.

Deadline for registration is 1 July 2005.

The registration fee of 200 CHF will be payable cash in Swiss Francs upon arrival. It includes a welcome reception on Sunday 9th October, a Workshop dinner on Tuesday 11th October and the CD-ROM.

Hotel reservations can be made via e-mail to:

cern.hostel@cern.ch

where a block of rooms has been pre-booked (don't forget to mention your participation in LLRF05).

5. Scientific Programme Committee

Kazunori Akai (KEK)	Larry Doolittle (LBNL)	Trevor Linnecar (CERN): Chair
Mike Brennan (BNL)	Roland Garoby (CERN)	Patricia Shinnie, (CERN): Secretary
Mark Champion (SNS)	Curt Hovater (JLab)	Stefan Simrock (DESY)
Brian Chase (FNAL)	Matthias Liepe (Cornell)	Dmitry Teytelman (SLAC)

6. Local Organizing Committee

Maria Elena Angoletta	Roland Garoby	Flemming Pedersen: Chair
Philippe Baudrenghien	Lydia Ghilardi: Secretary	Patricia Shinnie
Alfred Blas	Trevor Linnecar	

7. Contact

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Patricia Shinnie, Secretary to the Scientific Programme Committee, or

Lidia Ghilardi, Secretary to the Local Organizing Committee.

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