

LHC Background Study Group

Mandate (as received on 14/01/2009 from Oliver Brüning and Simon Baird) :

The LHC Background Study Group (LBS) is responsible for the optimization of background conditions in the LHC experiments during beam operation. The LBS will provide a forum for discussion between all stakeholders (ABP, MEF, LHC experiments, Collimation & Operations). The LBS will report regularly to the LHC PerfC.

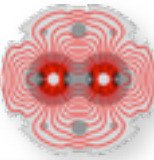
The LBS will study likely background scenarios for the LHC experiments, using different beam energies, intensities, bunch structures and interaction region optics in order to understand background production mechanisms. These studies should include simulations using the actual layouts of the interaction regions and expected beam conditions. These results of these simulations will be used to prepare in advance the strategy for background optimization and highlight potential problems.

The LBS will prepare the tools and data exchange mechanisms (between the CCC and the LHC experiments), which will be needed for background optimization during beam operation.

The LBS will provide practical, hands-on support to LHC operations in the CCC for the commissioning of the above tools and the optimization of the background conditions for all LHC experiments.

The core members of the LBS are:-

R. Appleby, R. Assmann, H. Burkhardt (chair), J. Jowett, D. Macina (deputy chair), W. Herr, a representative from each LHC experiment and a representative from BE/OP (A. Macpherson?)



1st action (14/01/2009) :

Informing the physics coordinator - Massimigliano Ferro-Luzzi

Discussion of mandate with Oliver, Simon and Massi.

Invite Massi as core member to take care of the contacts with the experiments.

- January : discussions with all core members. **Alick Macpherson agrees to act as scientific secretary.**
- Planning meetings : idea is to meet **initially once per month**, and every two weeks later if needed.
- When ? impossible to find a free time slot ok with everybody. Best compromise so far : Thursday afternoon. 1st meeting on **5 March in 874-1-011** 16:00-18:00. Discuss LBS and survey of what was done since BKG workshop, what next...

Organisation :

- **effective**, not too large working group
- **allowing the machine core team to work effectively**
- **considering luminosity / background together when needed**
- **open**

-- in particular to people directly involved in the work - Yngve, Mika Huhtinen ..

All information, code, results, available on the web, LBS page,

simulation page <http://project-lhc-bkg-sim.web.cern.ch>

and LPC <http://lpc.web.cern.ch/lpc/>