


# Introduction and News

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LHCb calorimeter upgrade meeting

# Today's program



## LHCb Calorimeter Upgrade Meeting

Monday, 10 September 2012 from 14:00 to 17:00 (Europe/Zurich)  
at CERN ( 61-1-009 - Room C )

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**Video Services** EVO Meeting scheduled Mon 10/09 from 13:00 to 19:00 : Phone Bridge ID:5717952. [More Info](#)

**Monday, 10 September 2012**

14:00 - 14:20	Introduction 20' Speaker: Frederic Machefert (Laboratoire de L'Accélérateur Linéaire (LAL), Orsay)	▾
14:20 - 15:20	Electronics	▾
14:20	<b>Analog electronics</b> 20' Speaker: Eduardo Picatoste Olloqui (University of Barcelona (ES))	▾
14:40	<b>Proposal for a test beam</b> 20' Speaker: Frederic Machefert (Laboratoire de L'Accélérateur Linéaire (LAL), Orsay)	▾
15:20 - 16:20	Performances	▾
15:20	<b>Measurement of irradiated modules</b> 20' Speaker: Iouri Guz (Institute for High Energy Physics (RU))	▾
15:40	<b>Photon selection efficiency</b> 10' Speaker: Dmitry Golubkov (ITEP Institute for Theoretical and Experimental Physics (RU))	▾

# Remaining meetings in 2012

- Plan is to have a meeting each month.
- One meeting out of two will follow upgrade electronics meeting (Ken). Calo electronics experts will probably be more available for those meetings, but do not plan to categorize. Everyone is welcome to contribute.
- Dates of the next meetings (2012) :
  - ▶ September 10th
  - ▶ October 12nd (following upgrade electronics meeting)
  - ▶ November 9th
  - ▶ December 14th (following upgrade electronics meeting)

# Follow-up of the FTDR

Slides of Pierluigi during the latest LHCb week.

## Interactions with LHC Committee

In June the LHCC appointed 4 internal referees for the LHCb-FTDR

In July we received written questions from referee: distributed to Upgrade Working Groups

In August, preparation of the written answers

1<sup>st</sup> meeting with referees on Aug. 31<sup>st</sup>

Presentations on Physics – VELO – Tracking with TT&T stations

Main goal of the questions: verify if a reduction in no. of Velo or Tracking stations is possible, so to reduce the cost (answer: NO, see Olivier talk)

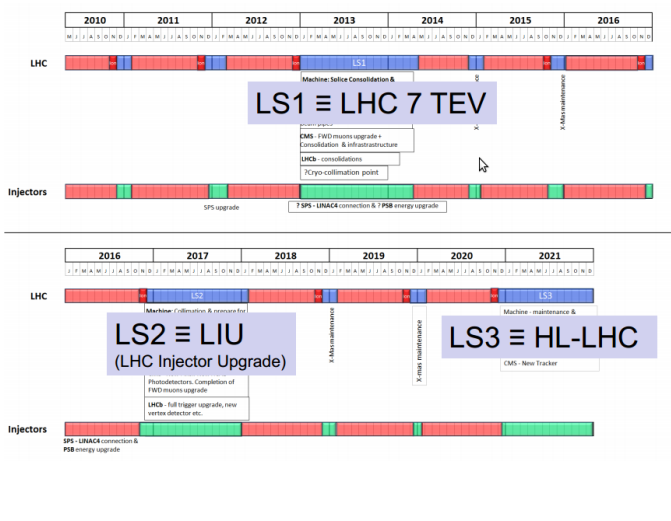
Very positive interactions with committee – Few more points to be clarified

Next meeting on Sept. 14<sup>th</sup> for final discussion

Goal: get an “approval” so to proceed towards CERN Research Board and RRB

# LHC planning presented at LHCb week

Planning presented at the latest LHCb week by Jorg Wenninger (CERN)



# Work package - Missing contributions

All the aspects of the upgrade of the calorimeter are more or less covered.

No clear solution envisaged to solve the problem of the degradation of the modules because of radiations.

- Baseline consists in replacing the inner part of the inner zone.
- We should benefit from the replacement of the monitoring fibers (LED) that should take place during LS1
- A path which is not exploited yet concerns the improvement of the modules through heat or UV illumination.
- Can we improve the tolerance of the new modules installed ?

# Next electronics upgrade preparation (I)

## *Front-end electronics specifications*

- The next electronics meeting aims at finalising the specifications of the upgrade front-end electronics.
- Anyone interested is welcome to participate to the meeting. Experts are welcome !
- The main item for discussion at the afternoon meeting on October 11th is supplying power to the front-ends.
  - 1 Overview of powering scheme, from counting room to front-end
  - 2 What power supplies will be used (eg Wiener/CAEN). Will additional supplies be needed? Will new types of supplies be used? Will additional cabling be required?
  - 3 What kind of local regulation will be done at the front-end? eg DC-DC convertor.
  - 4 If DC-DC is envisaged, what are the parameters? (eg voltages, current).
  - 5 Are there any worries about noise (eg switching) on the power supplies? Are tests needed?

*Should prepare our answers.*

# Next electronics upgrade preparation (II)

## *Electronics Architecture of the LHCb Upgrade*

- New document in preparation :

*Electronics Architecture of the LHCb Upgrade*

LHCb-PUB-2011-011

Ken Wyllie, Federico Alessio, Richard Jacobsson, Niko Neufeld

- Document is attached to the indico agenda.
- Please have a look and prepare comments/suggestions/question for the next electronics upgrade meeting.

The next electronics upgrade meeting is important. Need to prepare it intensively. I could imagine it is useful to organize an evo meeting before.