



MERIT installation: Controls for the 5MW power-supply

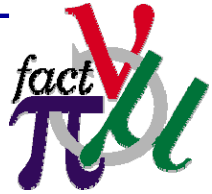
A.Fabich
CERN AB-ATB

<http://cern.ch/merit>

September 2006



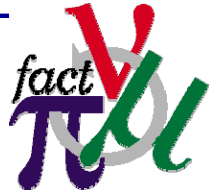
People



- AB/PO
 - Gilles Le Godec

- AB/CO
 - Marc Vanden Eynden
 - Pablo Alvarez Sanchez (Javier Serrano)

- MERIT
 - Adrian Fabich (Ilias Efthymiopoulos)

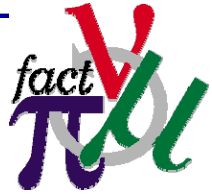


Purpose of this meeting

- Evaluation of possible layout and work effort
- The 5MW power supply in building 193
- Controls layout
- Estimate of installation work



Reminder



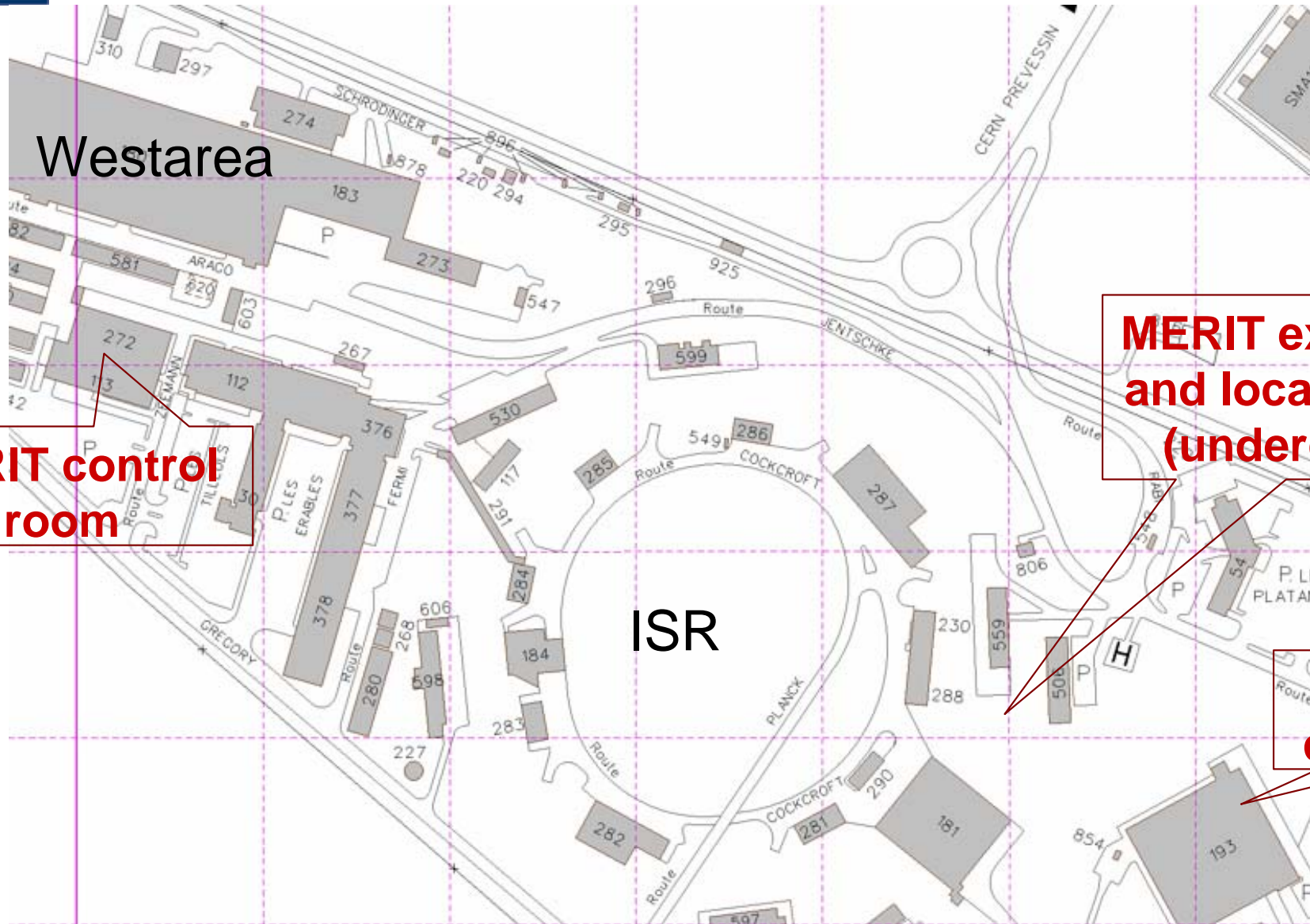
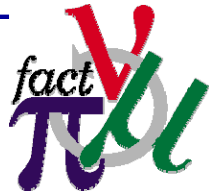
- MERIT
 - Single pulse experiment (limited cycles ~500)
 - Runtime very limited (a few weeks)

- Installation is temporary
 - Jan-July 2007 (Run including a commissioning phase)
 - Solutions and implementation of controls layout **could be based on rental.**

- Budget (T273180) available



Location



Westarea

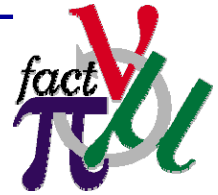
MERIT control room

MERIT experiment and local controls (underground)

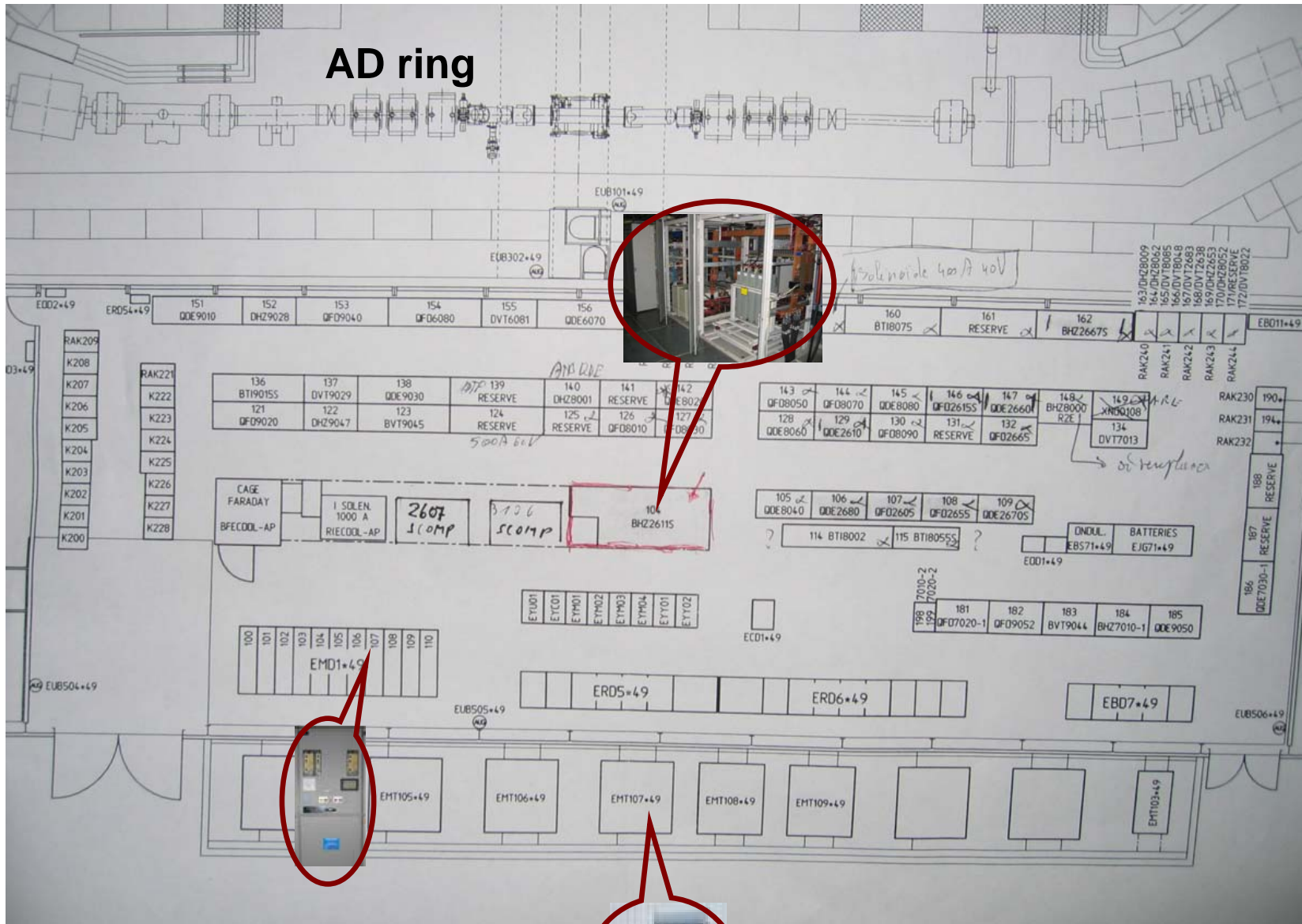
Power converter



Building 193



AD control room

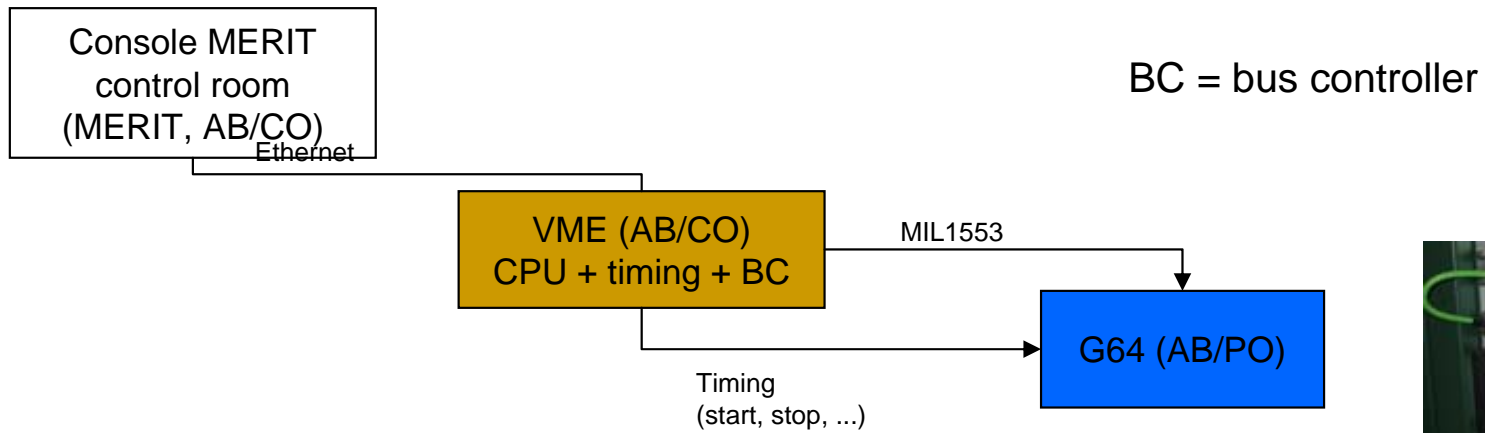




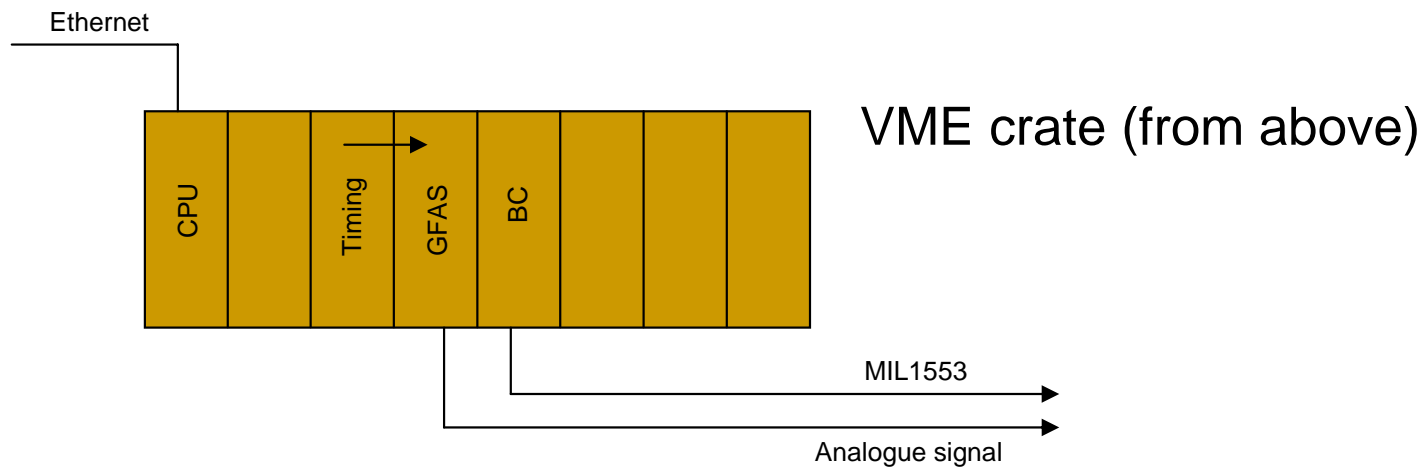
Controls layout (Javier)



Version 1 (notation Gilles): without GFAS

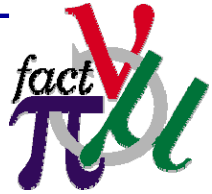


Version 1 (notation Gilles): with GFAS





Additional information



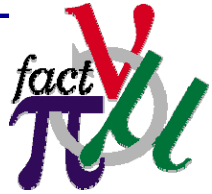
- MERIT control room: room 272 S-002
 - Independent from CCC

- Information transmitted to PowerControls
 - Reference current
 - Timing, trigger

- Information read (displayed in MERIT control room):
 - Current reading
 - Status of power supply (Off, ready, interlock, error)



Questions



- With or without GFAS?

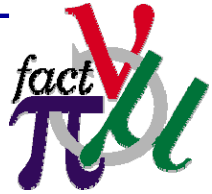
- Which parts are already available in building 193?
 - VME crate?
 - Cables (MIL1553, timing ...)?
 - Ethernet?
 - ...

- Software in the MERIT control room

- Where are the interlocks coming into the game?



Schedule & runtime



- Spring/Summer 2006: Installation
 - Power supply (converter + transformer)
 - DC cabling (building 193 to TT2A)
- Autumn 2006: Power converter fully refurbished
- Winter 2007:
 - AC cabling
 - Controls
 - Commissioning of the power supply
- February 2007: MERIT hardware installation
- March-April 2007: MERIT commissioning
- May 2007: ready for MERIT physics run