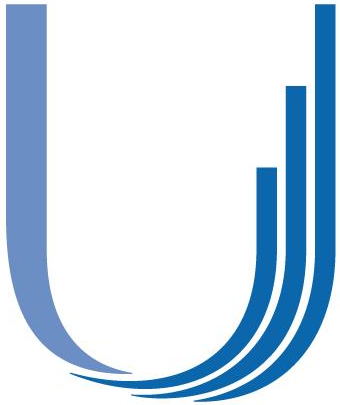

LHC Injectors Upgrade

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SEM and BTV renovation

CERN

Specifications

- Consolidation of SEM (CPS) and BTV (SPS) consists of replacing the obsolete electronics with new one
- CPS SEM new design in common with LINAC4
- SPS BTV deploy the system used in the CPS and LHC since many years
- No new specifications, the system will have performances equal or better than old system
- New SEM electronics covers and extends the intensity range of the old electronics

Status of Development

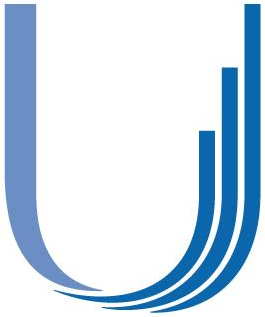
- SEM
  - Design finished
  - Electronics cards ready
  - Installation started
- BTV
  - No new design needed
  - Electronics cards available since long time
  - New (tube) cameras ready

Installation and Commissioning Plan

- SEM
  - Whole PS complex upgraded simultaneously
  - All machines have the same priority
  - Hardware commissioning foreseen before startup 2014 followed by commissioning with beam
  - Grid for septum 42 (LS2) ?
- BTV
  - Routine operation, hardware check sufficient to validate the new systems
  - BA80 cabling not done in LS1

Budgetary Requirements

- BTV SPS
  - ~50 kCHF 2013/2014 Cabling
  - ~30 kCHF 2014/2017 Cameras and spares
  - Difficult to procure VIDICON tubes, it may become much more expensive to maintain tube cameras
- BTV PSB
  - BI.MTV30 (L4C), BT.MTV10 and BT.MTV30 move (2GeV)
    85k 2014, 10k 2015, 13k 2018
- SEM CPS
  - Project “finish” end 2013 (old consolidation budget)
  - Cabling/installation for L3 delayed to 2014
  - 88k foreseen for 2014 (most already used in 2013)
  - Budget for grid in septum 42 to be defined



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THANK YOU FOR YOUR ATTENTION!