Report from the MCWG, 4th R2E Committee Meeting

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Update since the last R2E Project Meeting (1/4)

- Info from the last 5th MCWG meeting (24th March): https://indico.cern.ch/conferenceDisplay.py?confId=130708

- **BCT monitor discussion for the TI2/8 injection and in the LHC** (link)
  - No reliable (better than 5% exists for the TI2/8 injection; no info for the beam lost in the injection lines
  - In the LHC, due to "delay" issues, only the DCBCT are to be considered for reliable beam intensity measurement

- **P1 application benchmark update for 2010 operation** (link)
  - PMI in the tunnel (up to cell 4) + PAT in the UJ14/16 shielded areas (agreement between 1x (PMI1411,PAT1411)-5x (PMI1412))
  - Assuming symmetry of beam line element for P5 (not completely true), benchmark for TOTEM location (5x (PMI5714))

Update since the last R2E Project Meeting (2/4)

Detector	Measured dose (μSv/h) @16.8 MHz	Ratio (meas/simu)	Comments	
PMI1411	15000	1.07	In the LHC tunnel	OK
PMI1412	50000	5.76	In the LHC tunnel	?? 5x?
PMI5714	1100	5.25	In the LHC tunnel	?? 5x?
PAT1411	0.6	0.63	In UJ	OK

	HEH fluence (cm^{-2}/pp)	R (n_{th}/20MeV)	Expected counts	Observed counts	Comments
1LM01S	1,20E-07	103.94	136.37	5	In UJ
1LM02S	5,99E-07	108.61	727.53	60	In UJ
1LM03S	1,63E-04	4.49	465.26	821	In the tunnel

FLUKA calculated R-factor → TLD measures ~10

Agreement within a factor of 2x (assuming FLUKA-calculated R)

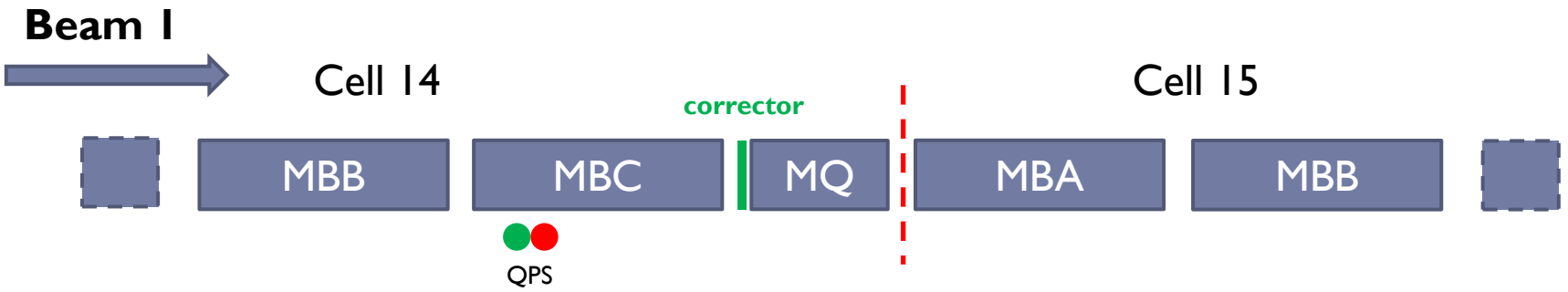
Update since the last R2E Project Meeting (3/4)

- **Discussion on the weekly report** (link)
  - Already discussed …

- **New FESA class for the RadMon and new installations** (link)
  - A new interface class for the RadMon will be deployed in the following weeks, changing both the use and the "expert" interface
  - A wrapper will be used to maintain the same names for 2011 as in 2010 (change in the middle of the year is not really easy to digest) → full change from 2012
  - New FIP RadMon have been installed at Point 8 to monitor tunnel side losses

- **LHC R2E-dedicated MD** (link, document)
  - A request for a dedicated MD have been requested → "orbit bump peaking in C14R2", $8*10^9$ p/bunch, total required intensity ~1-5*10^{12} protons
  1. Application benchmark + gradient in case of losses!
  2. Risk factor evaluation (bigger uncertainty given the spread of memories)
  - Objective is to perform the test before the next TS (possible?)

LHC beam tests cell 14R2 – present configuration



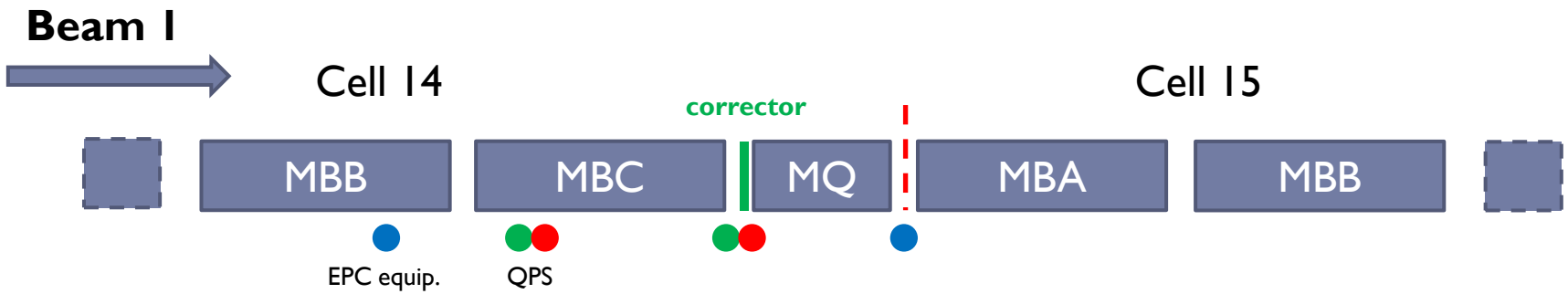
FIP RadMon (5V)

BatMon (3V)

BatMon (5V)

8h requested, 450 GeV/beam requested,
$5*10^9$-$1*10^{10}$ p/bunch, 1 bunch/beam

LHC beam tests cell 14R2 – proposed configuration



i.e.: +1 FIP RadMon (5V) +1 BatMon (3V) +2 BatMon (5V)