



# Setup Beam Flag

## updated proposal

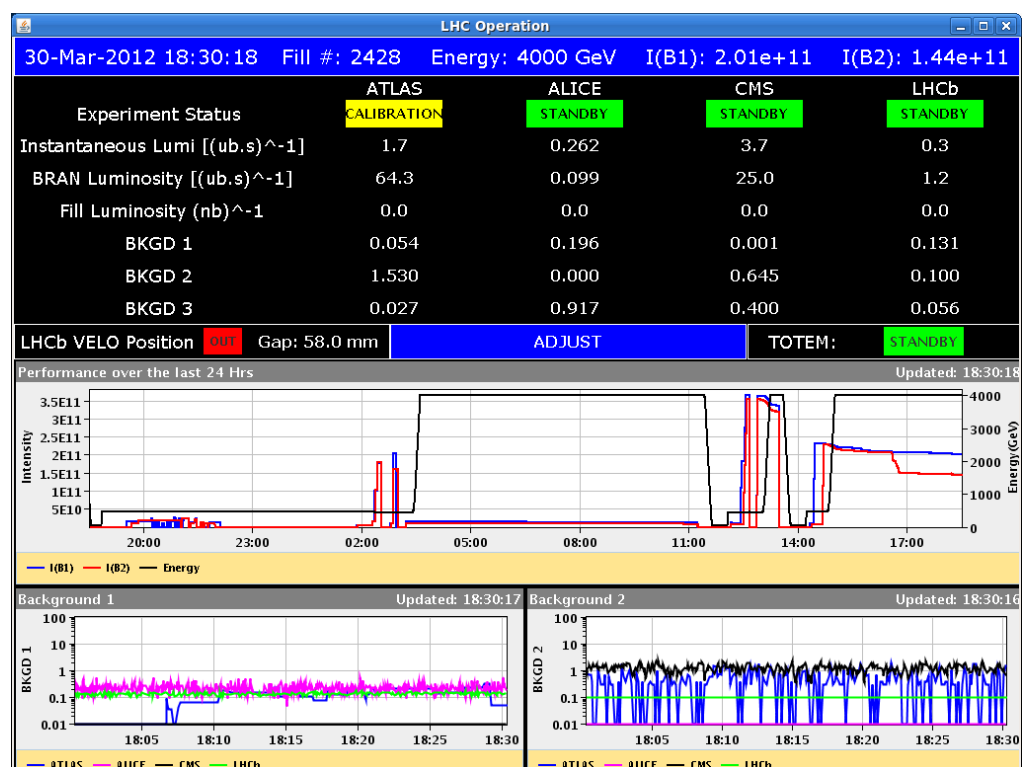
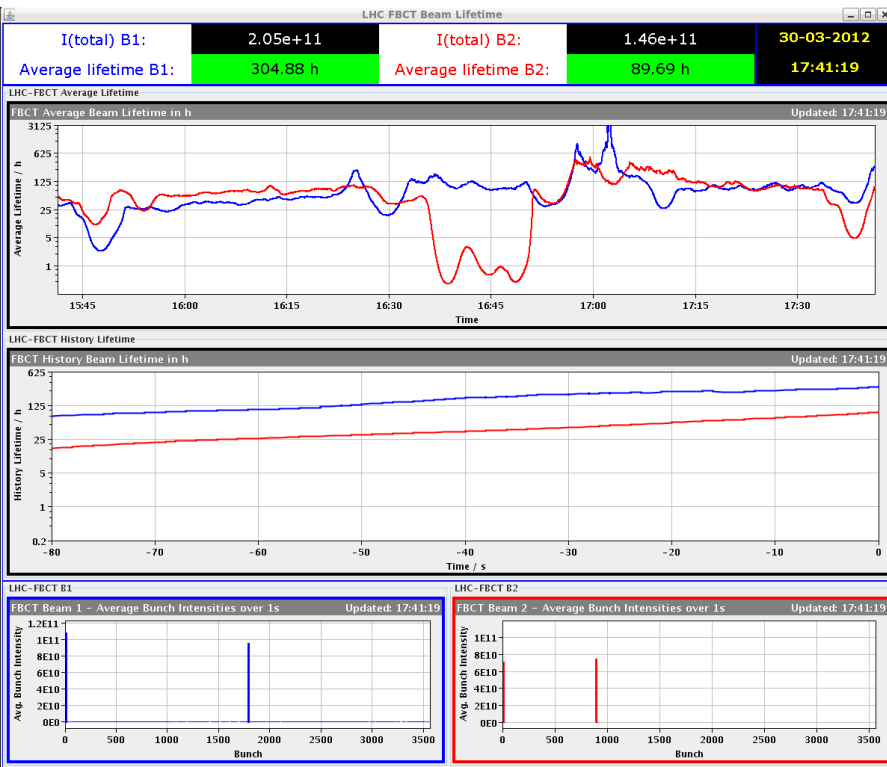
MPP

# Input – limitations – needs for the setup

- BPMS (IR6) new sensitivity limit:  $2e10p/bunch$ .
- BPMs (orbit / ring) sensitivity limit:  $5e10p/bunch$ .
- BPMs (collimators) sensitivity limit:  $5e9p/bunch$ .
- Efficient setup of collisions:  $2 \times \sim 1e11p$
- Collimation:
  - Intensity “consumed” during full setup:  $\sim 7e10p$
  - Intensity “consumed” per transv. loss map (ADT):  $\sim 1e10p$

Machine State	Setup	Beam	Qualification transvers	Qualification momentum	Asynchronous dump
Injection	Full system	B1, B2	H, V	Pos. , Neg.	Asynch.
Flat top	Full system	B1, B2	H, V	Pos., Neg.	Asynch.
Squeezed non-colliding	16 TCTs	B1, B2	H, V	Pos.?, Neg.	Asynch.?
Collision	16 TCTs	B1, B2	H, V	Pos., Neg	Asynch.

# Qualification 30.03.2012, Collisions / Comments

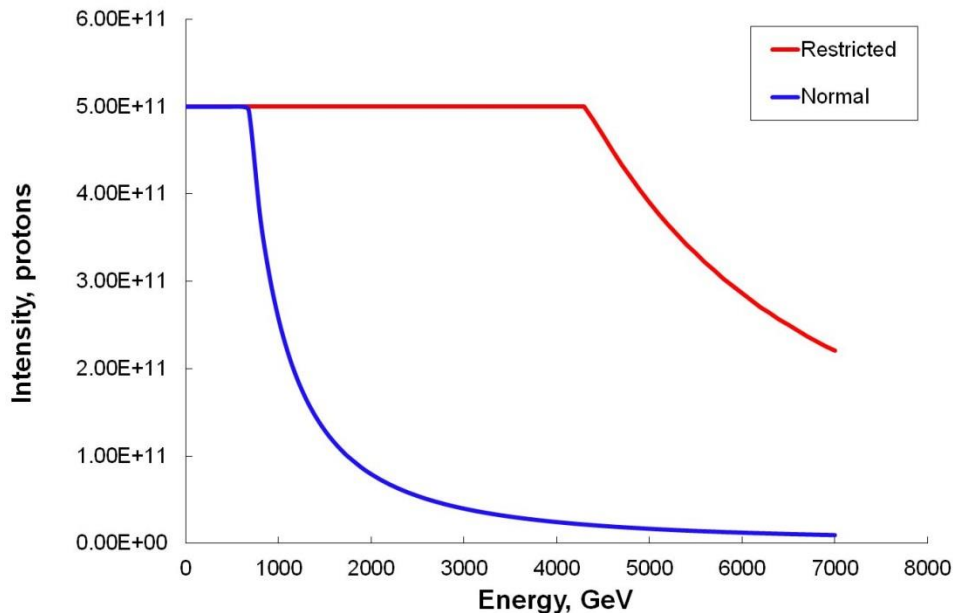


## Comments:

- At beginning of run, cycles for collimation qualification (in 2012 usually ~3 per mode) are also used to test and optimize the machine cycle.
- Restricted SBF (unsafe beam!) should be chosen as such to allow efficient and as safe as possible setup AND should be limited to the intensity necessary!
- For 2015 we propose to do a rough setup of the TCTs with pilots during first cycle.

# Updated values for SBF

- 1) Normal SBF:  $1.1e10$  [ALL]
- 2) Restricted SBF:  $1.25e11$  x 2 bunch [Special users – Coll, collision setup]
- 3) Restricted SBF:  $1.5e10$  x 16 bunches [MDs with MP doc.]



Limiting intensities for different-level SBFs at 6.5 TeV and 7 TeV

	6.5 TeV	7 TeV
Normal	$1.1e10$	$9.4e9$
Restricted	$2.5e11$	$2.2e11$



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