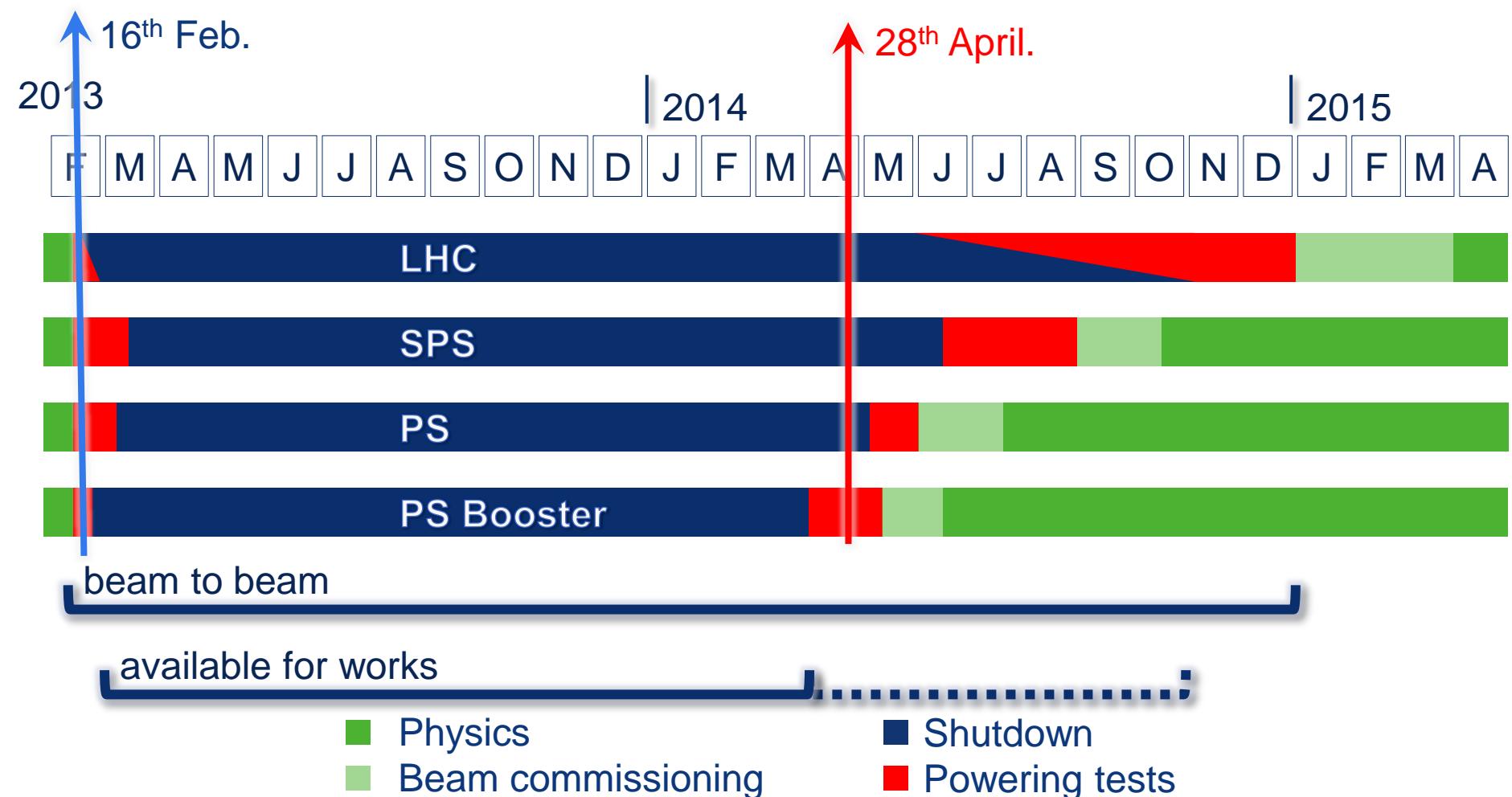


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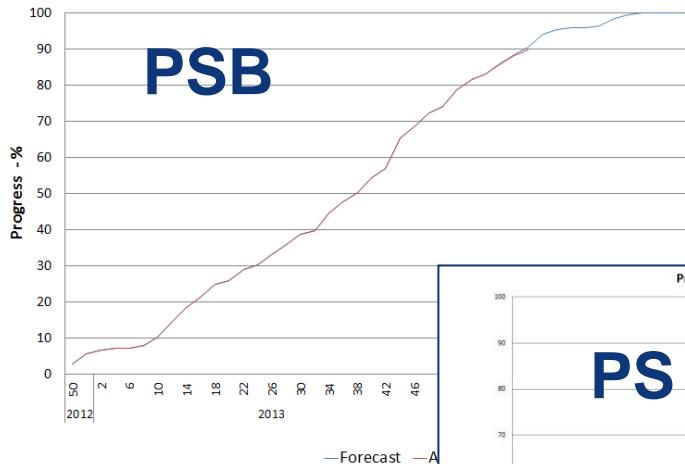
LHC Long Shutdown 1 (LS1) @RRB
Frédérick Bordry
28th April 2014

LS 1 from 16th Feb. 2013 to Dec. 2014

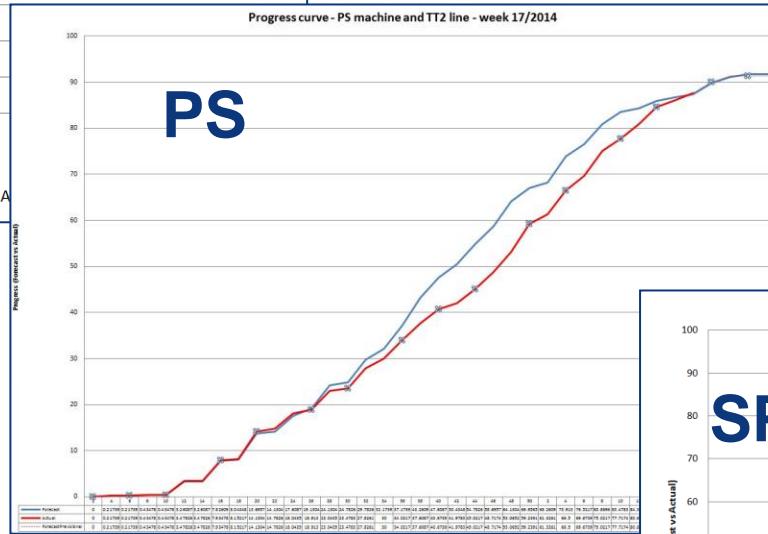


LHC Injectors dashboards

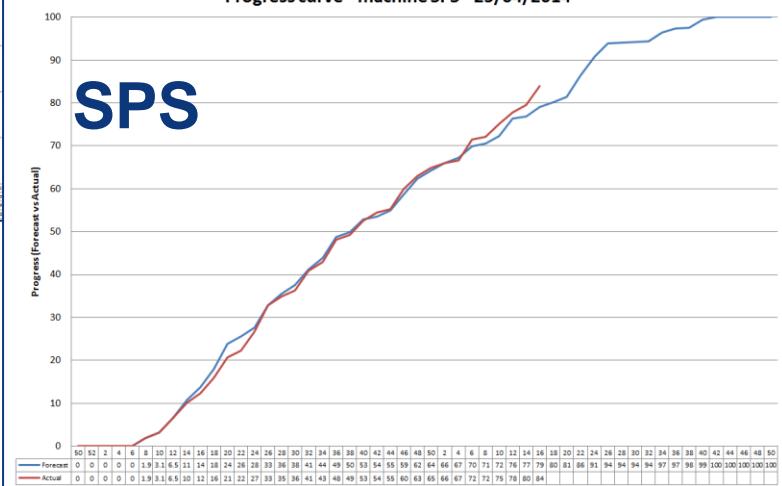
Progress curve - PSB machine - week 12 (17/03/2014)



Progress curve - PS machine and TT2 line - week 17/2014

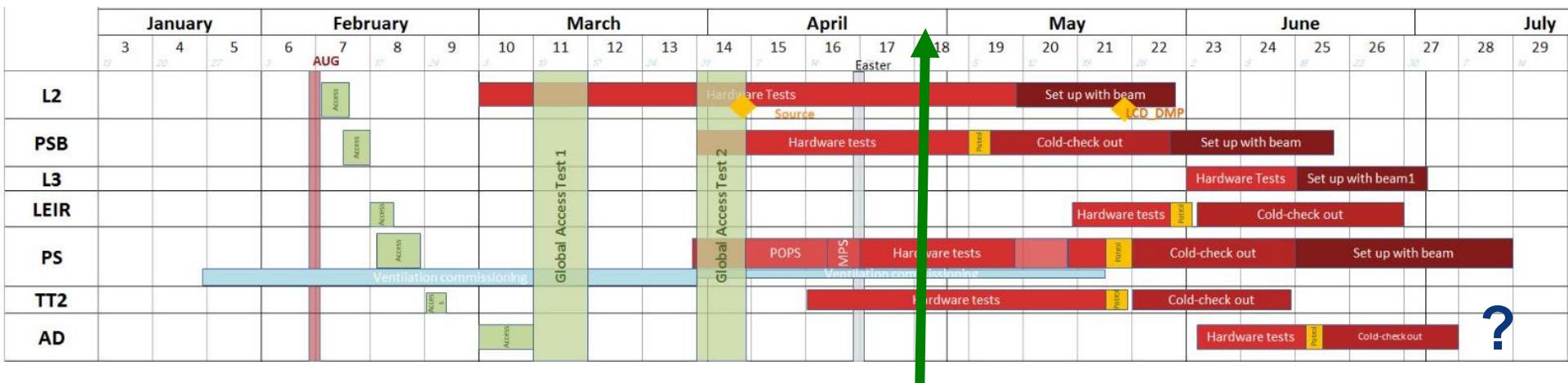


Progress curve - machine SPS - 25/04/2014



LHC Injectors start-up

- LHC-injectors ... getting ready for hardware tests
 - Full commissioning of the new access system PS &PSB : hardware tests will start in April
 - Beam for late spring in Linac 2 ➔ summer in PS



?

The main 2013-14 LHC consolidations

Opening:100%

1695 Openings and final reclosures of the interconnections

Closure: 75%

100 % done

Complete reconstruction of ~~1500~~ of these splices

3000

99 % done

Consolidation of the 10170 13kA splices, installing 27 000 shunts

98 % done

Installation of 5000 consolidated electrical insulation systems

98 % done

300 000 electrical resistance measurements

90 % done

10170 orbital welding of stainless steel lines



18 000 electrical Quality Assurance tests

90 % done

10170 leak tightness tests

70 % done

Done

3 quadrupole magnets to be replaced

15 dipole magnets to be replaced

Done

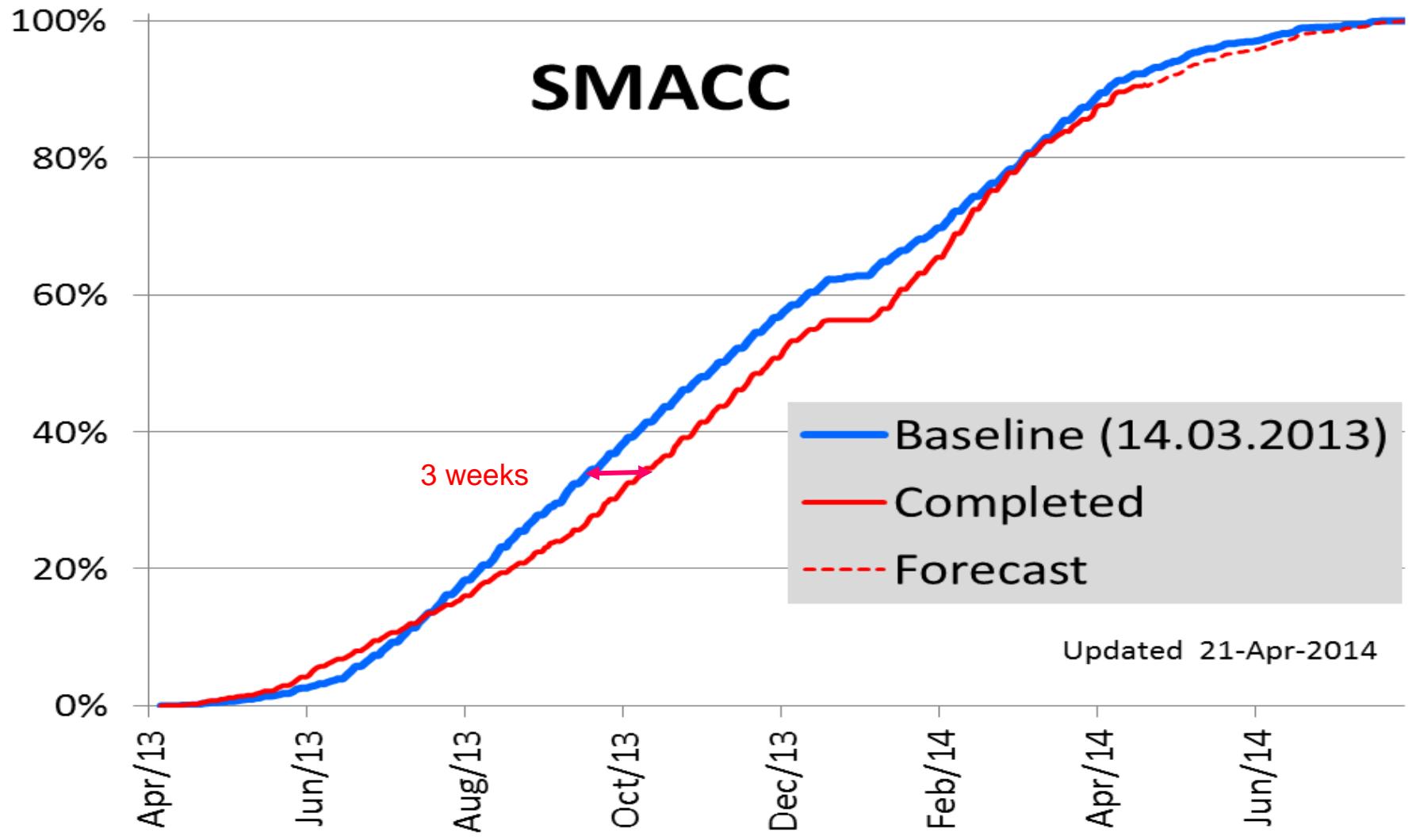
Installation of 612 pressure relief devices to bring the total to 1344

100 % done

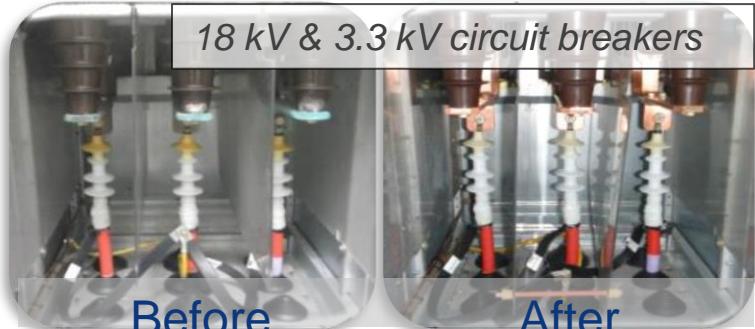
Consolidation of the 13 kA circuits in the 16 main electrical feed-backs

96 % done

Superconducting Magnets And Circuits Consolidation Dashboards



The other activities

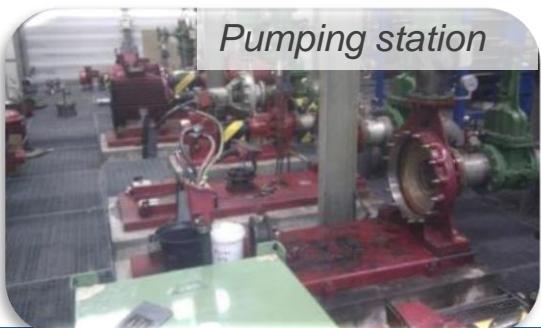
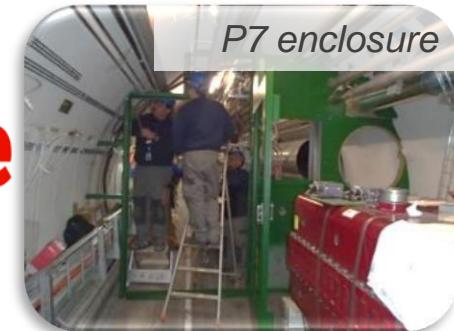


LBDS Kickers
Cavities Vacuum
Survey Tests P7-enclosure
Cooling-stations Thermoswitch
Water-Cooled-Cables RF
Cooling-towers Access
Collimators Cryogenic AUG
Cabling Optical-fibers
Instrumentation Helium
Dump Shielding

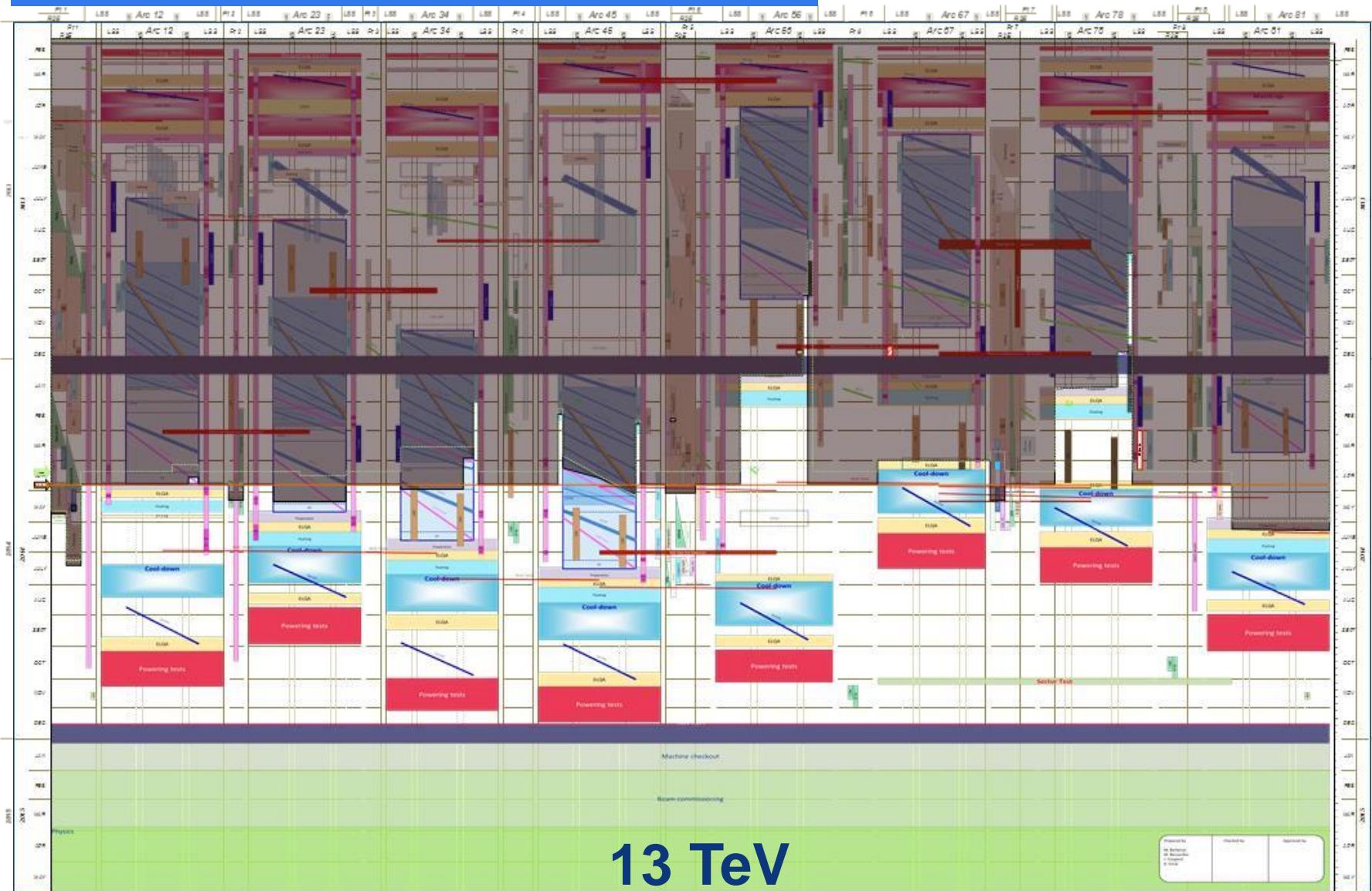
Maintenance

Consolidation

Upgrade



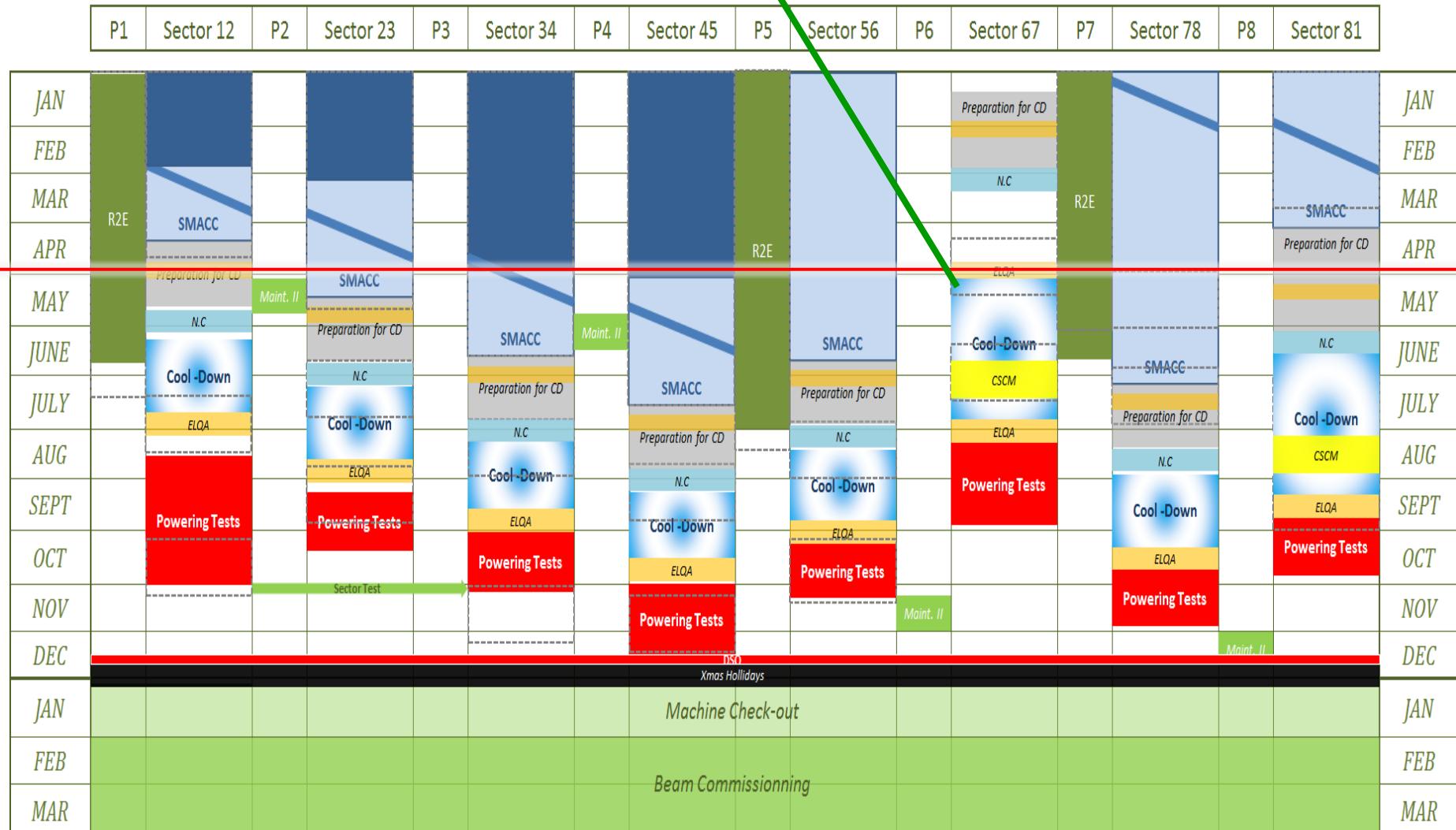
LHC LS1: status 28th April 2014 | 13



13 TeV

LS 1: LHC status

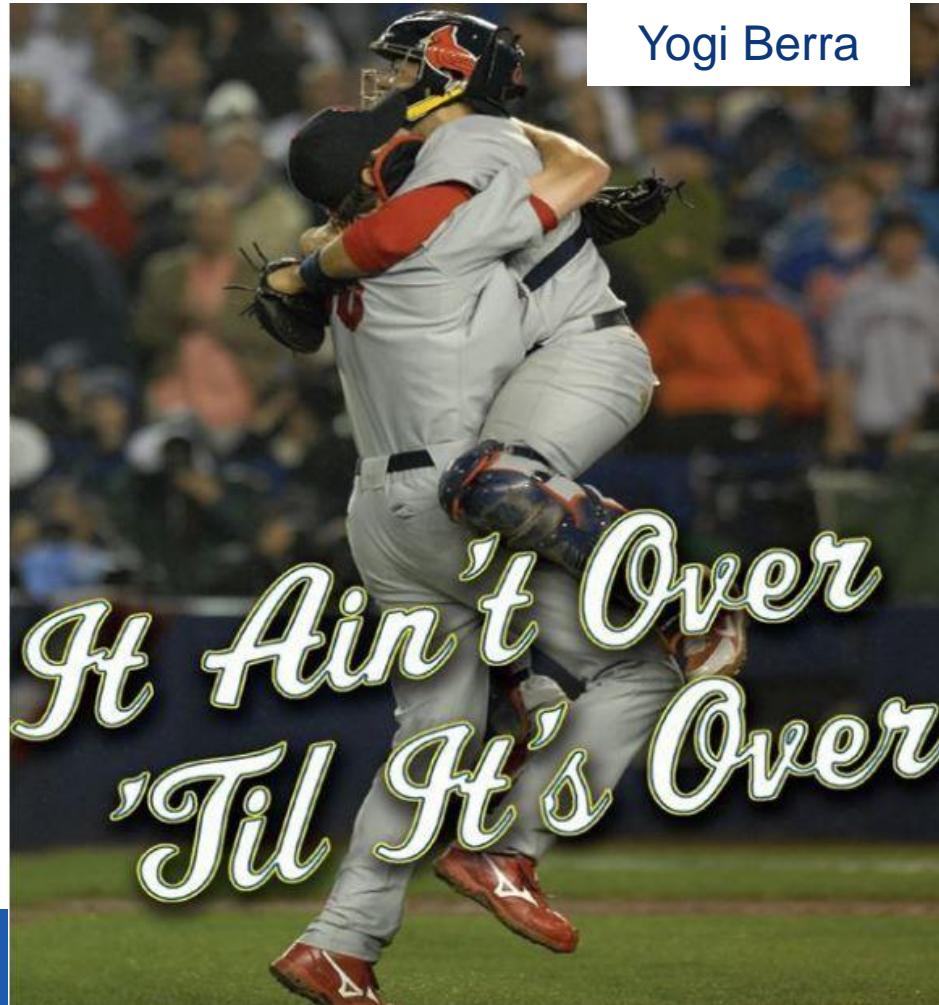
1st Cool Down: starting on 7th May



LS1 status

LHC injectors getting ready for hardware tests

LHC: all signals are green for beam on January 2015



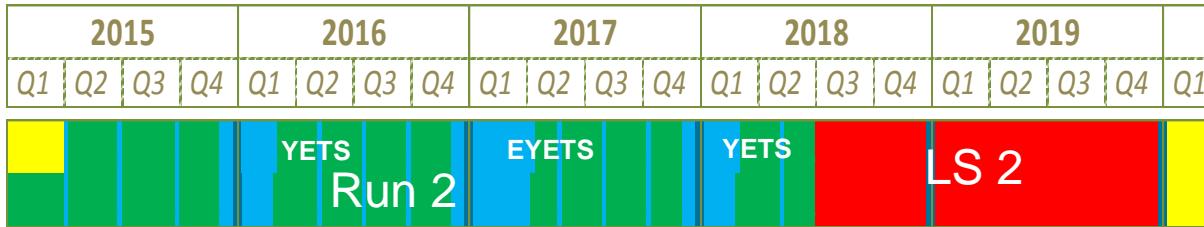
Yogi Berra

LHC schedule: Run2 and LS2

LS2 starting in 2018 (July) => 18 months + 3 months BC



30 fb⁻¹



LHC
Injectors

(Extended) Year End Technical Stop: (E)YETS

LS 2

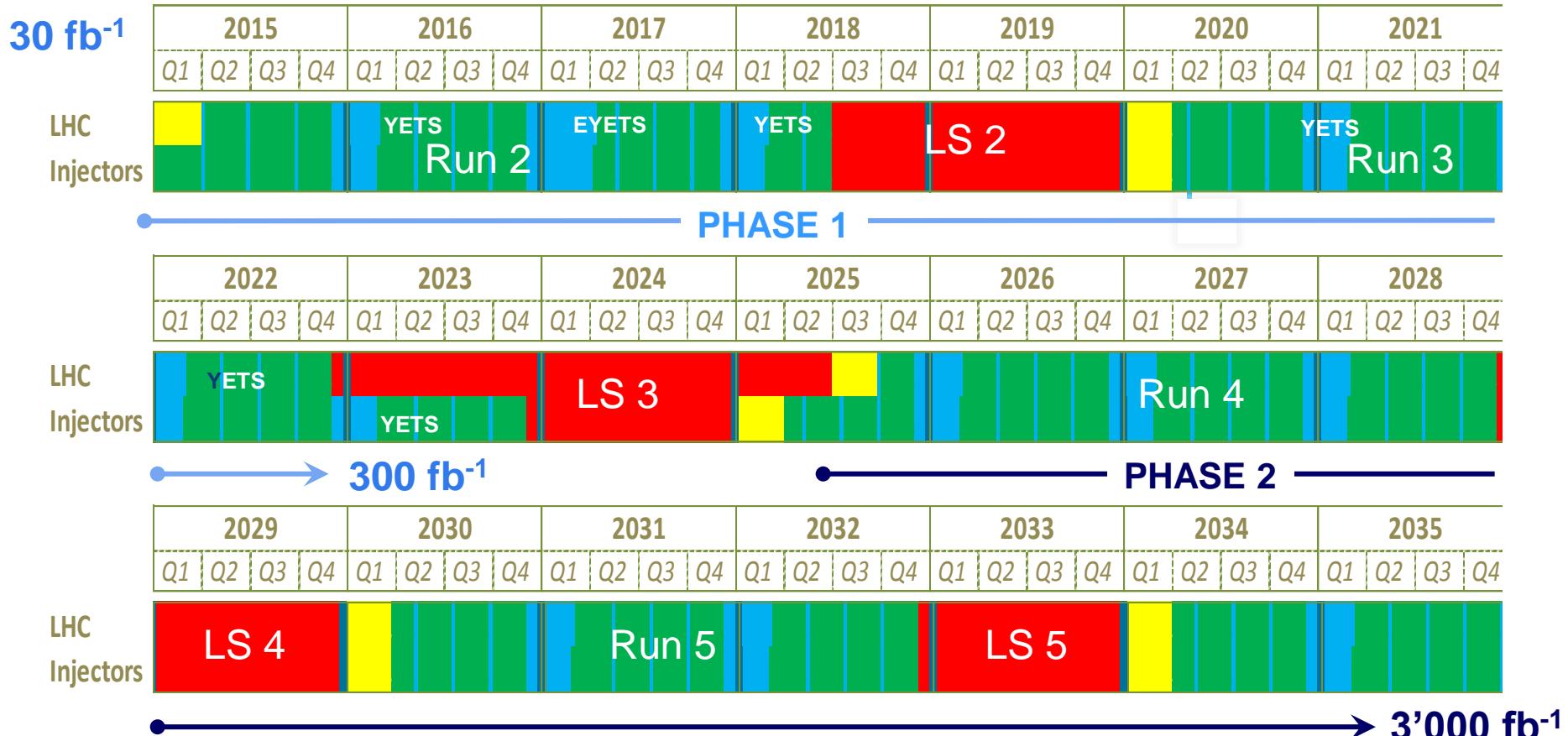
Run 2:
Start with 6.5 TeV
and later decision towards 7 TeV
according to magnet training

LHC roadmap: schedule beyond LS1

- LS2 starting in **2018 (July)** => **18 months + 3 months BC**
 LS3 LHC: starting in **2023** => **30 months + 3 months BC**
 Injectors: in **2024** => **13 months + 3 months BC**



(Extended) Year End Technical Stop: (E)YETS





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