

# Updates on the LHC schedule

Memo received (and distributed for information to the EB) a few weeks ago:

CERN/DG-2007-136-O

25 May 2007

## MEMORANDUM

**To:** LHC Experiments Spokespersons  
**Cc:** Jos Engelen – DG/DI  
Lyn Evans - LHC  
Massimiliano Ferro-Luzzi - PH  
**From:** Robert Aymar - DG  
**Subject:** LHC Schedule



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In assessing the LHC schedule in the light of recent developments I have decided that the engineering run at injection energy, originally foreseen for the end of this year, shall not take place. The most efficient path to maximal integrated luminosity at 14 TeV by the end of the 2008 run is now to commission all the LHC hardware to full energy, before starting operations with beam.

An injection test in November 2007, affecting point 8, i.e. LHCb, is still under consideration.

For the other experiments, the date at which the vacuum chambers should be installed and baked out is now end of March 2008 and you can use this date in your planning.

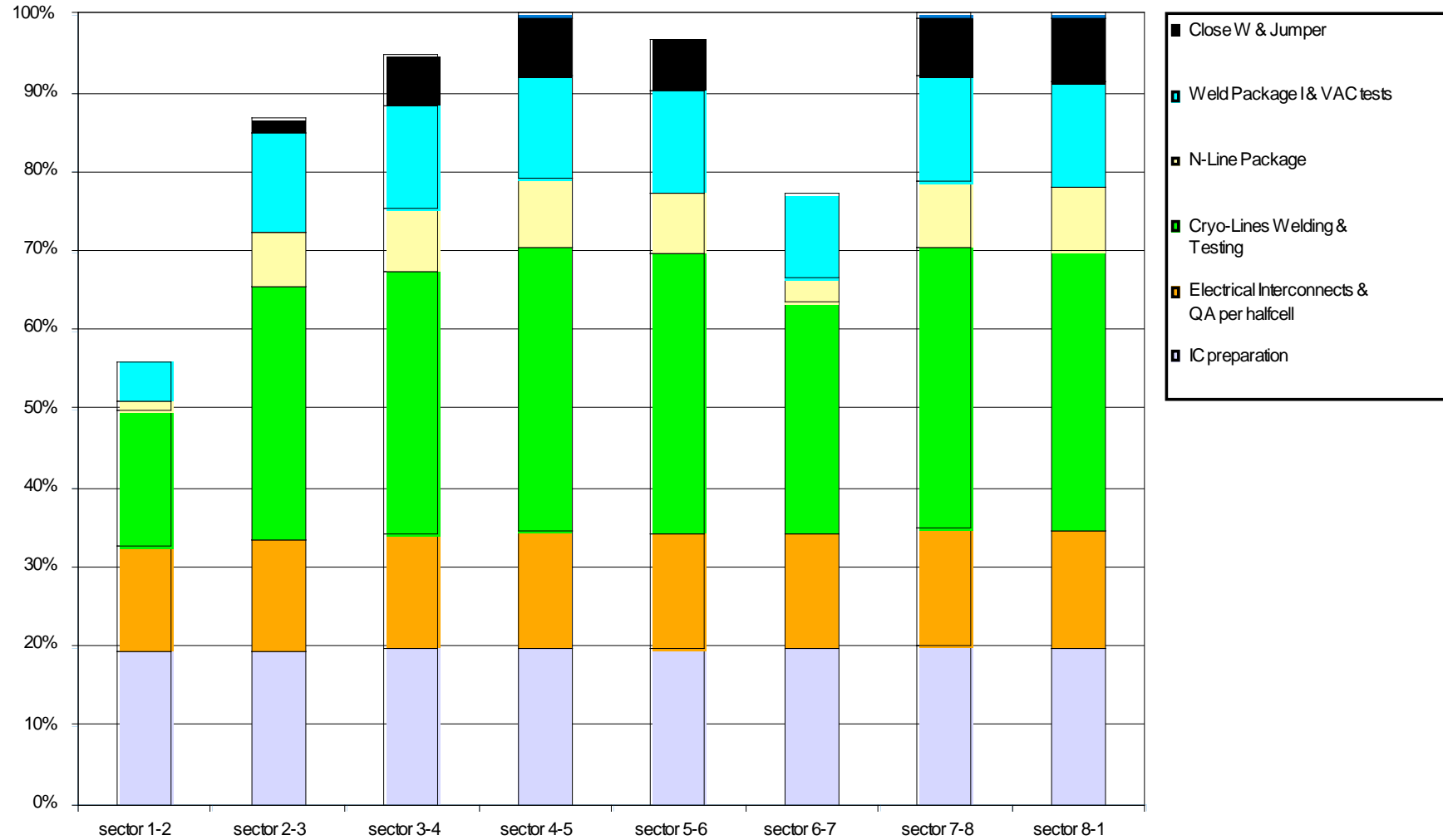
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**The following is a straight-forward copy of slides from Lyn Evans as shown at this week's CERN SPC (and I guess then also Council)**

[https://edms.cern.ch/cedar/plsql/navigation.tree?cookie=1283002&p\\_top\\_id=1085299672&p\\_top\\_type=P&p\\_open\\_id=1008148388&p\\_open\\_type=P](https://edms.cern.ch/cedar/plsql/navigation.tree?cookie=1283002&p_top_id=1085299672&p_top_type=P&p_open_id=1008148388&p_open_type=P)

# Magnet interconnections

General Advancement of Interconnects per Sector 18-June-2007

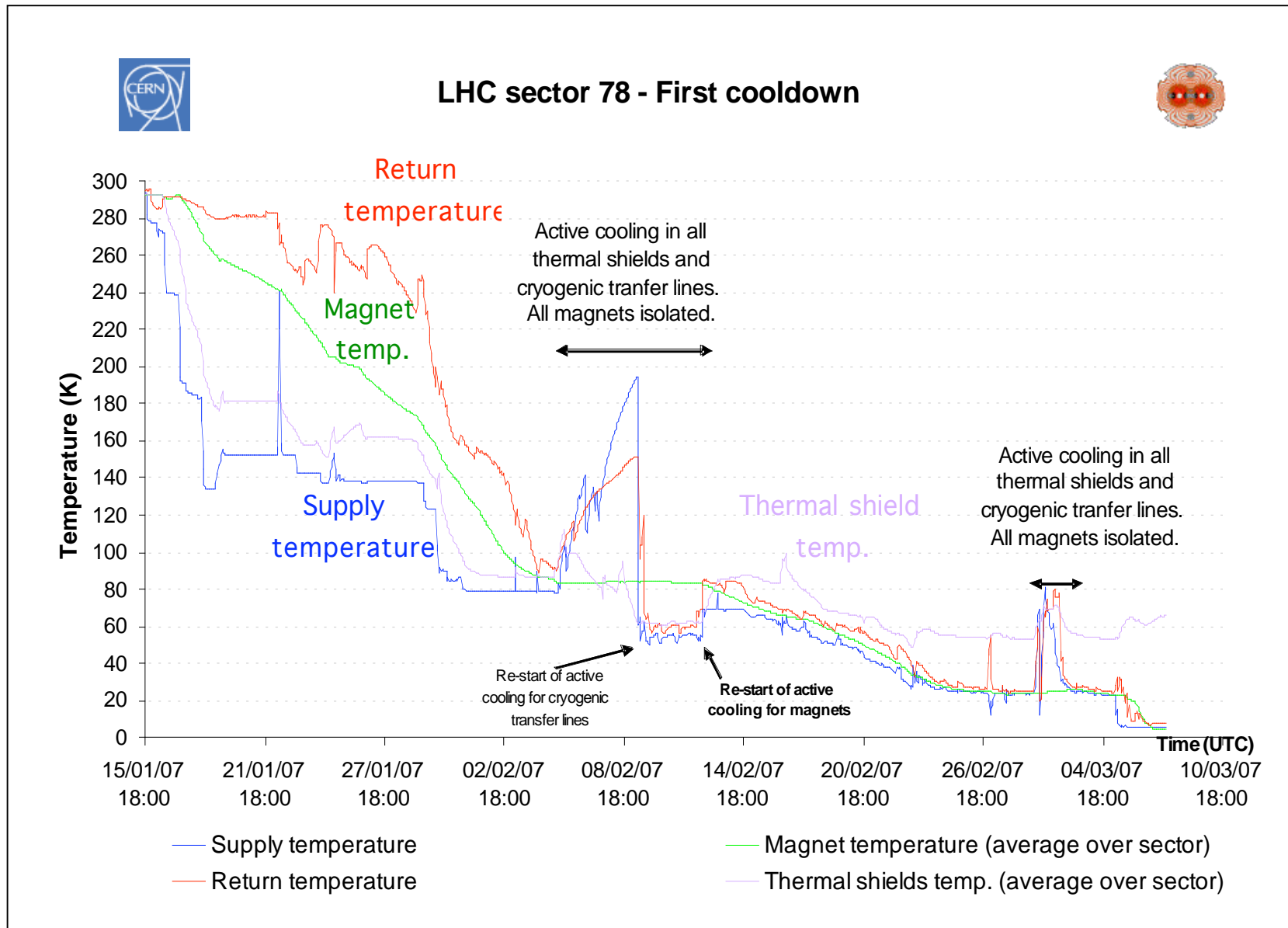


## Status Sectors

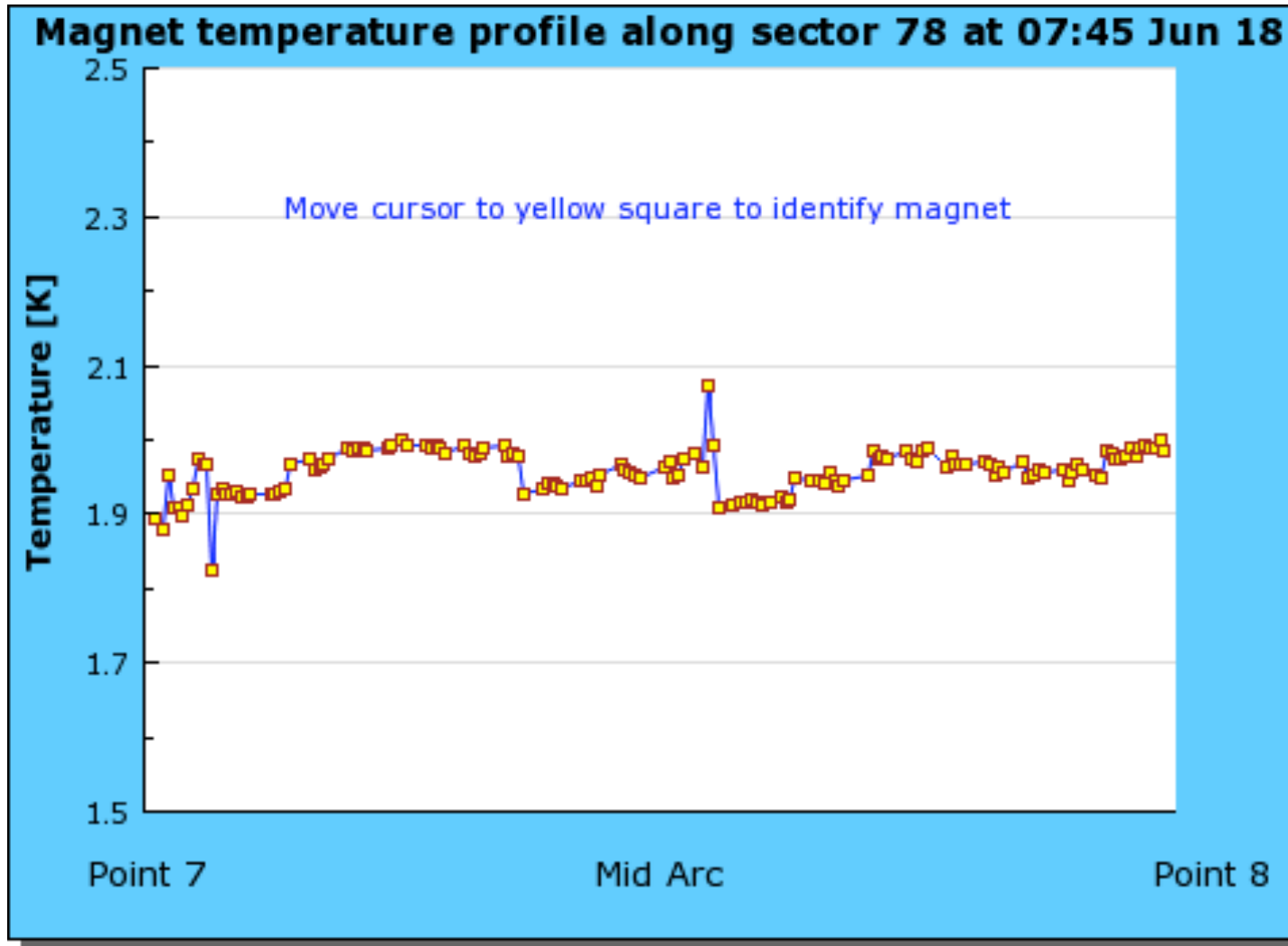
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- Sector 7-8: cold and stable. Ground fault on dipole bus located to an instrumentation box. Power tests continue.
- Sector 4-5: flushing until end of week then cooldown.
- Sector 8-1: pressure test performed over the weekend. Three leaks to repair. IT repair starts today.

# First cool-down of Sector 7-8



# Sector 7-8 Cooldown

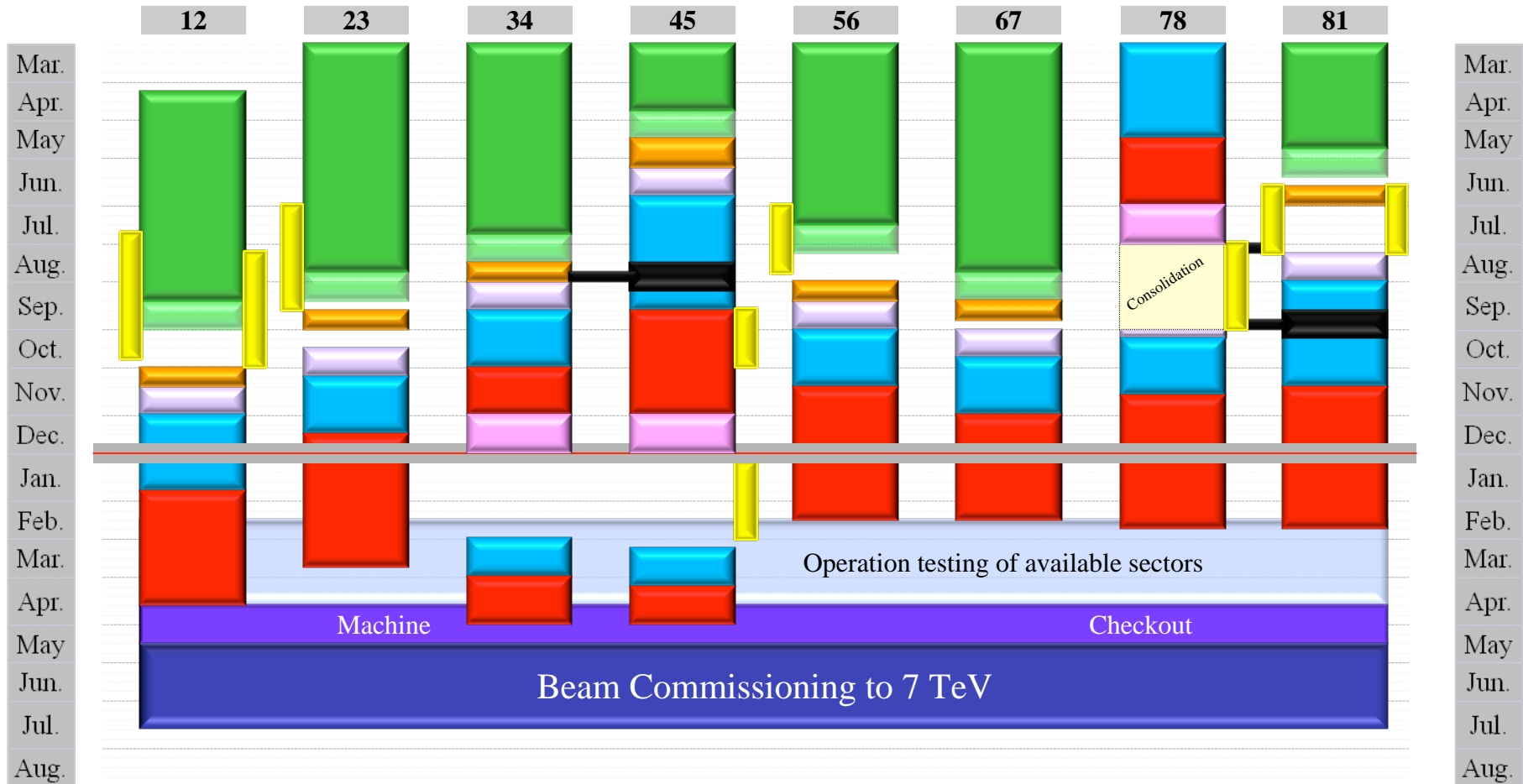










## General schedule

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- Engineering run originally foreseen at end 2007 now precluded by delays in installation and equipment commissioning.
- 450 GeV operation now part of normal setting up procedure for beam commissioning to high-energy
- General schedule being reassessed, accounting for inner triplet repairs and their impact on sector commissioning
  - All technical systems commissioned to 7 TeV operation, and machine closed April 2008
  - Beam commissioning starts May 2008
  - First collisions at 14 TeV c.m. July 2008
  - Pilot run pushed to 156 bunches for reaching  $10^{32} \text{ cm}^{-2} \cdot \text{s}^{-1}$  by end 2008
- No provision in success-oriented schedule for major mishaps, e.g. additional warm-up/cooldown of sector

# LHC General co-ordination schedule, EDMS 102509, 12 June 2007



 Interconnection of the continuous cryostat	 Global pressure test & Consolidation	 Warm up
 Leak tests of the last sub-sectors	 Flushing	 Powering Tests
 Inner Triplets repairs & interconnections	 Cool-down	

Lyn Evans  
SPC 18-June-2007

# 2008 LHC accelerator schedule

	Jan				Feb				Mar												
Wk	1	2	3	4	5	6	7	8	9	10	11	12	13								
Mo		7	14	21	28	4	11	18	25	3	10	17	Easter 24								
Tu	1																				
We				<b>Injector Complex shutdown</b>																	
Th																					
Fr																					G. Friday
Sa																					
Su										<b>Operation Testing of Available Sectors</b>											

	Apr				May				June				
Wk	14	15	16	17	18	19	20	21	22	23	24	25	26
Mo	7	14	21	28	5	Whit. 12	TI 19	26	2	9	16	23	
Tu	Linac2 HW Tests	PSB Machine Checkout	SPS Machine Checkout	PS Machine Checkout	SPS Machine Checkout	Setup with Beam							
We													
Th													
Fr					1 May/AS								
Sa	<b>Operations Testing of Available Sectors</b>			<b>LHC Machine Checkout</b>				<b>Beam Commissioning to 7TeV</b>					
Su													

CPS Closure (Apr 14), Linac2 Start with Beam (Apr 15), SPS Closure (Apr 16), PSB Start with Beam (Apr 16), PS Machine Checkout (Apr 17), LHC Closure (Apr 18), PS Start with Beam (Apr 18), SPS Start with Beam (Apr 19), LHC Startup with Beam (Apr 21), TI Setup with Beam (Apr 21), Beam Commissioning to 7TeV (June 22-26)



# 2008 LHC accelerator schedule

