

CRYSTAL COLLIMATION STUDIES AT CERN: PLANS FOR 2009

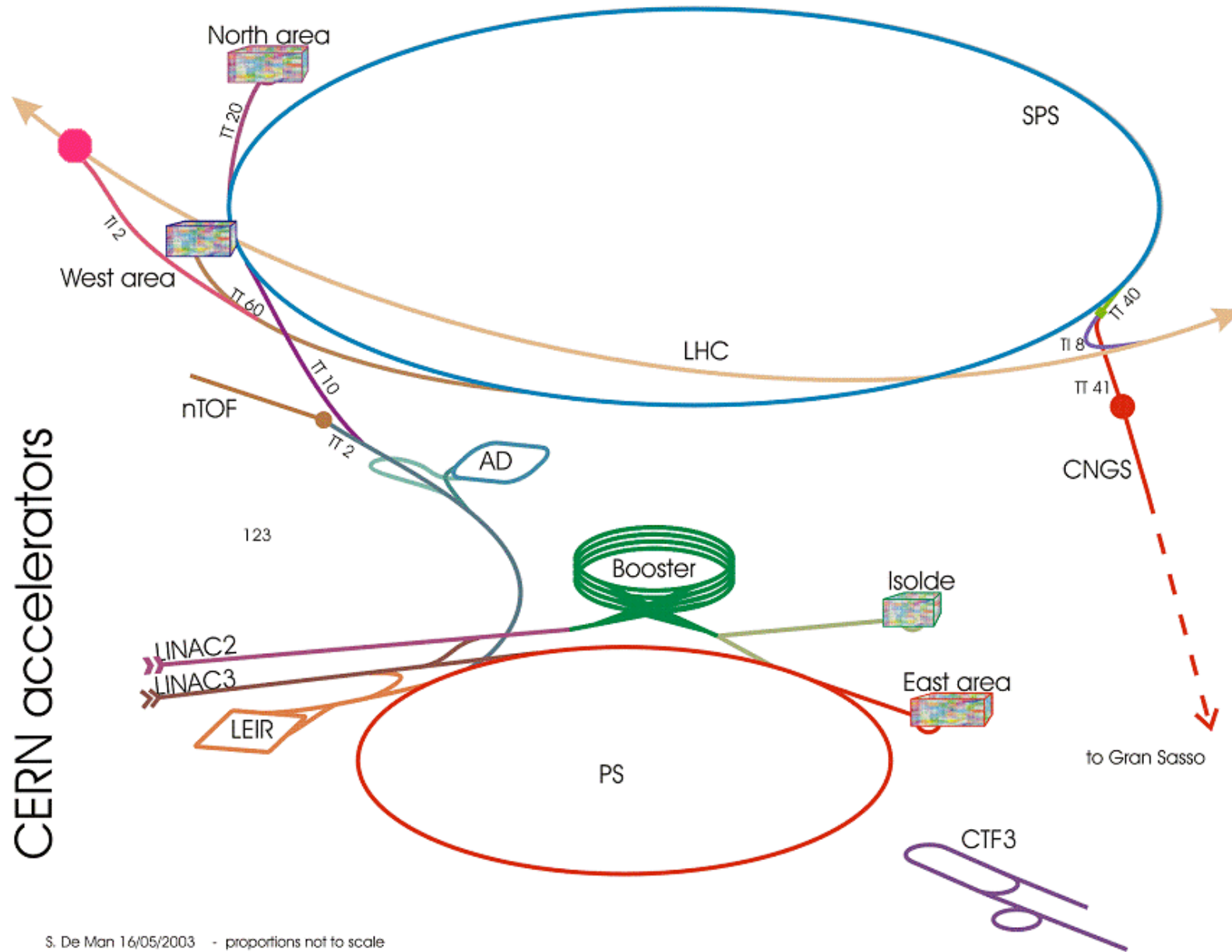
E. Métral

(Coordinator of the machines studies of the PS&SPS complex)

We will start with
a single bunch of
5E10 p/b

- ◆ **UA9 experiment in the SPS**
 - 120 or 270 GeV/c in coast, few p bunches of few 1E10 p/b (kept bunched or debunched) + slow transverse blow-up (BU) → Slow and constant diffusion of the tails
- ◆ **UA9 experiment in the North Area (NA): Fixed Target experiments**
 - 400 GeV/c p (no ions)

CERN accelerators

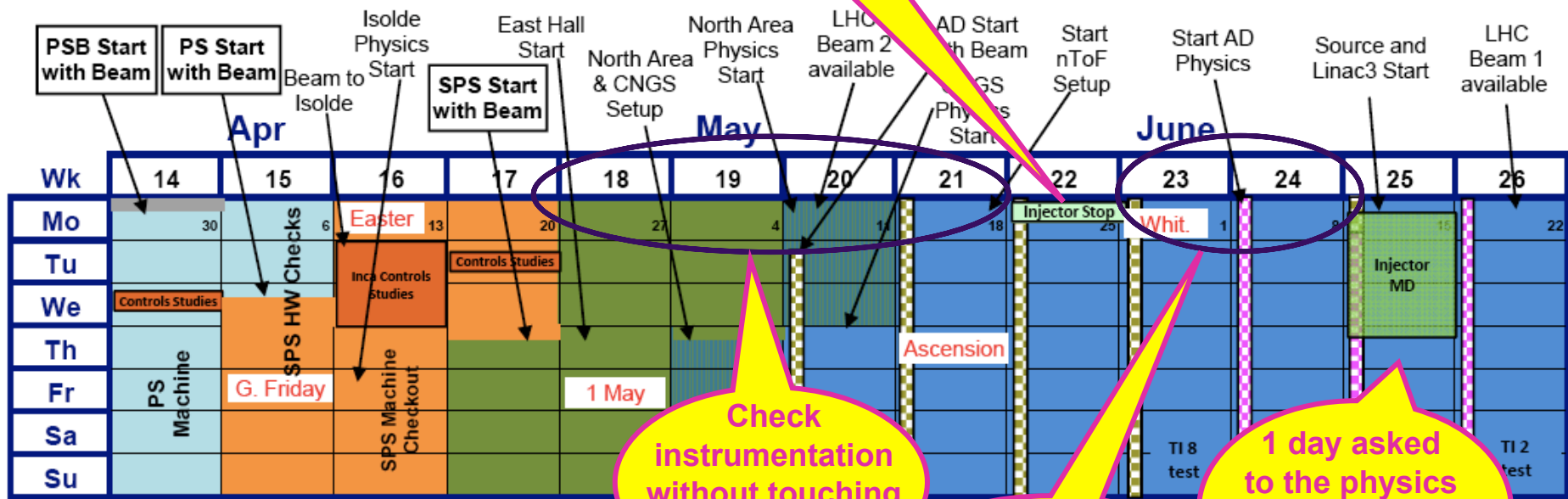
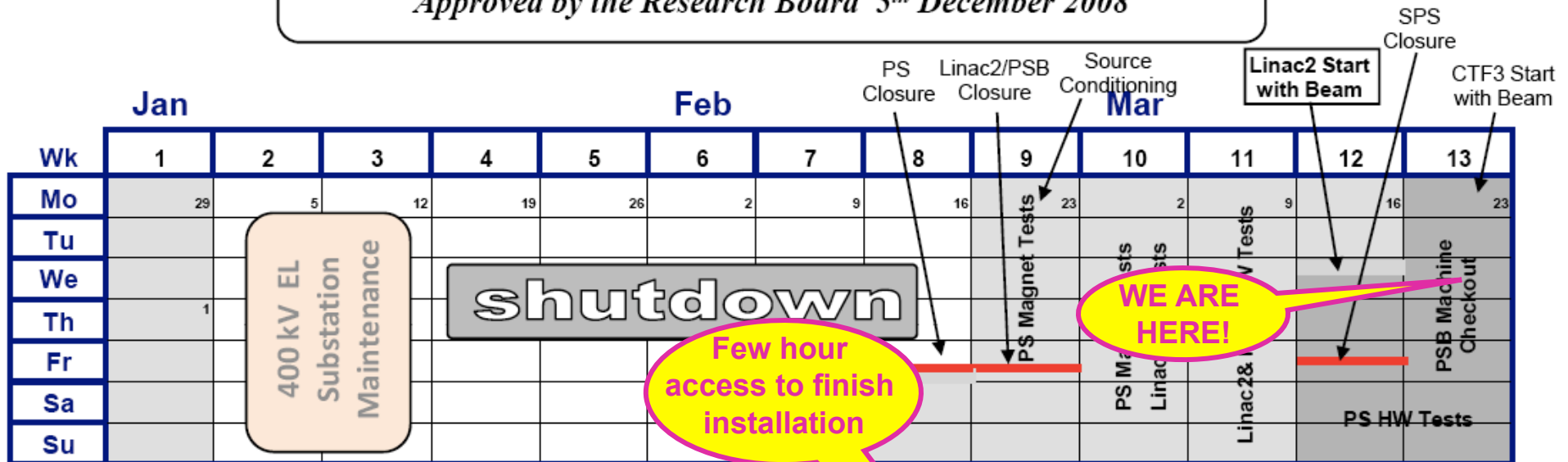


S. De Man 16/05/2003 - proportions not to scale

IN THE SPS

2009 Injector Accelerator Schedule

Approved by the Research Board 5th December 2008



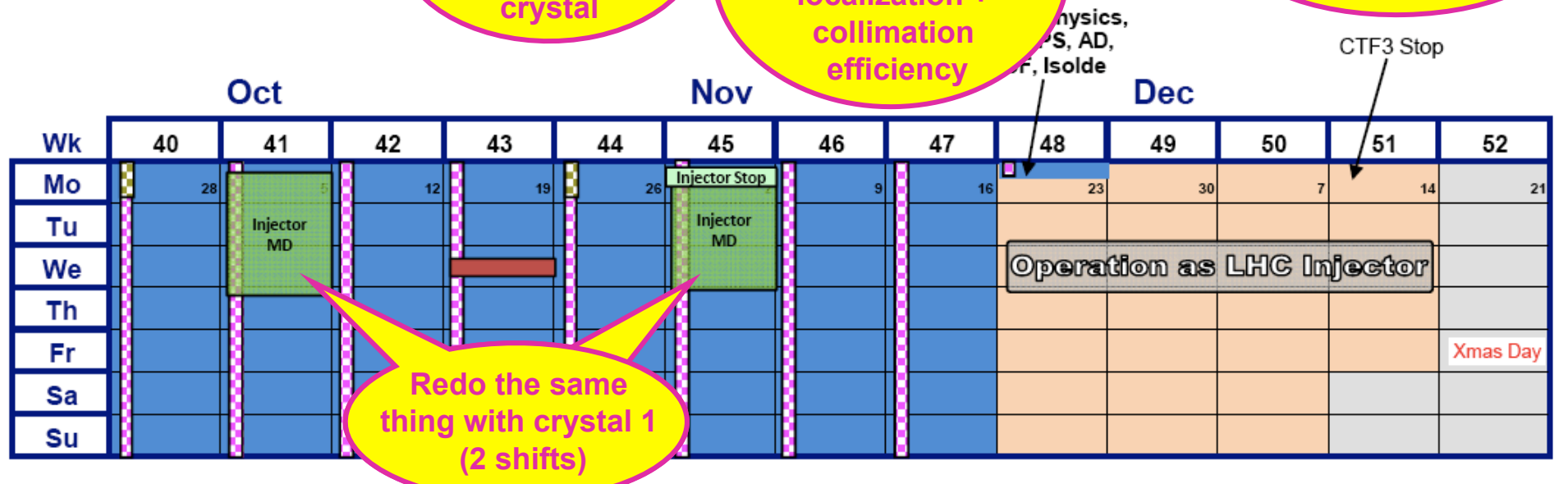
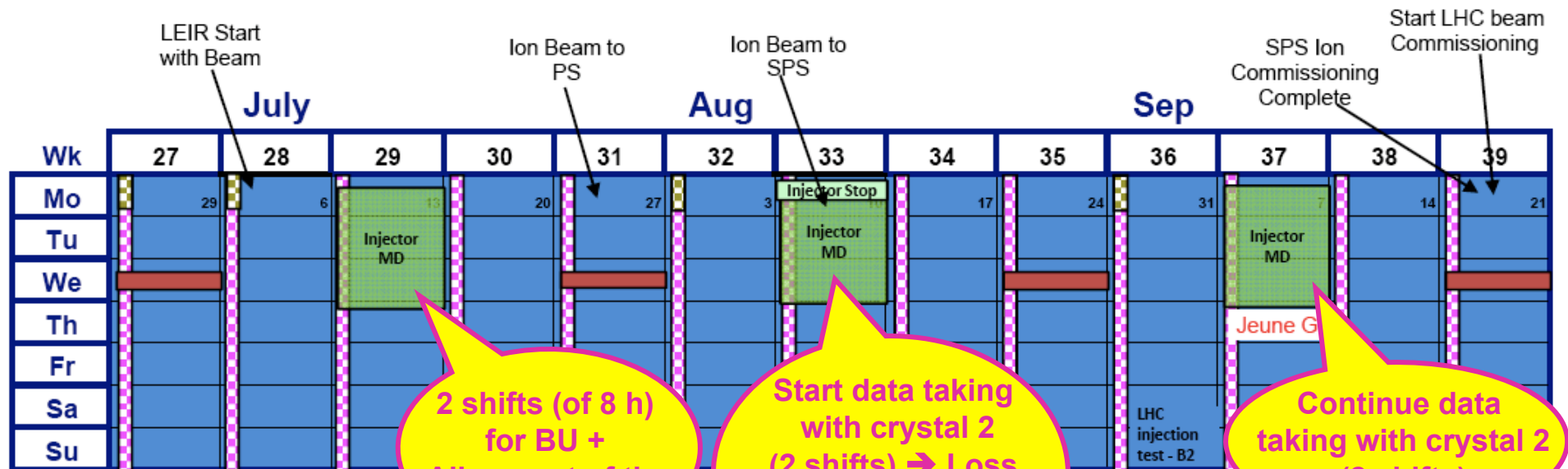
Few hour access to finish installation

WE ARE HERE!

Check instrumentation without touching anything!

Checks after new installation

1 day asked to the physics coordinator for cycle setting-up + BU



- Injector Complex MD Block
- 8-hour Wednesday MD
- Injector Stop Technical Stop for the Injector Chain
- AD Physics
- AD Setting-up & Studies

IN THE NA

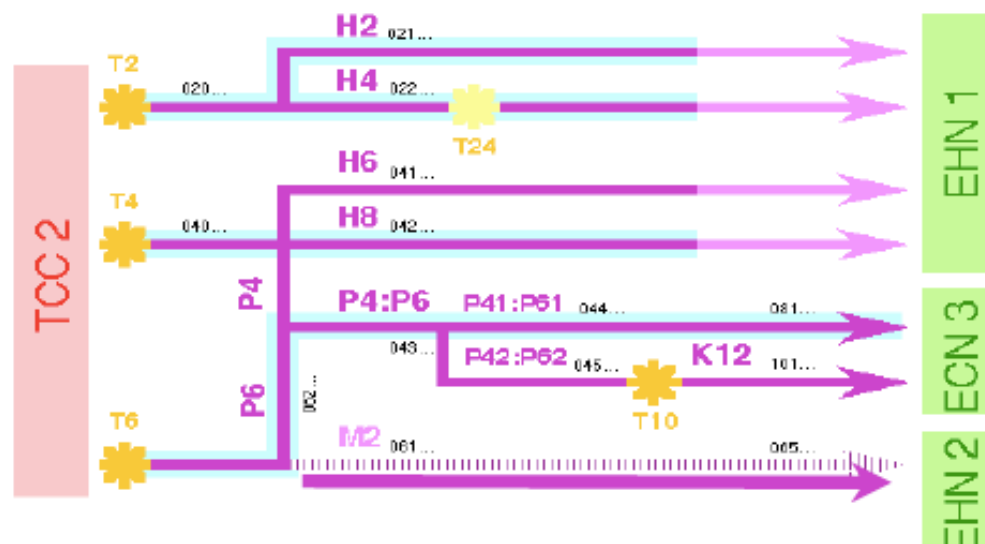
Targets and secondary beams

The 3 proton beams are directed onto the primary targets:

T2 → H2 and H4 beam lines

T4 → H6, H8, and P0 beam lines

T6 → M2 (muon) beam line



Experimental Areas:

- **ECN3**: underground experimental hall that can receive the primary proton beam with high intensity in ECN3
- **EHN1**: surface experimental hall that can receive secondary beams and/or attenuated primary proton beams
- **EHN2**: surface experimental hall that receives the secondary beams or intense muon beam.

Courtesy of J. Wenninger

Colour code: green = SPS-exp ; purple = LHC-exp ; dark blue = Outside exp ; yellow = not allocatable or Machine Development

	P1	P2	P3	P4	P5	P6																			
	35 30 Apr 4 Jun	35 4 Jun 9 Jul	35 9 Jul 13 Aug	35 13 Aug 17 Sep	35 17 Sep 22 Oct	32 22 Oct 23 Nov																			
T2 -H2	NA Setup 3	CMS CASTOR 7	CREAM 7	NA61 TR 3	NA61 TR 4	CMS HCAL 10	WCALO 11	CMS SIUpgrade 10	CMS SIUp 4	CMS HCAL 13	NA61 18	NA61 35	NA61 11	CREAM 7	NA61 17	NA61 24	NUCLEON 8								
T2 -H4	NA Setup 3	CMS BCM 7	CMS ECAL 6	NA63 4	SITRD 3	SITRD 7	RD51 7	RD51 15	CMS ECAL 3	CMS ECAL 9	DREAM 14	CALICE RPC 6	COMPASS CALO 6	COMPASS CALO 9	CALET 7	INSURAD 14	CMS ECAL 5	CMS ECAL 5	NA63 20	UA9 10	RD51 10	CMS ECAL 9	LHCf 13		
T4 -H6	CERF 0	CERF++ 5	Monopix 5	MMEGAS 7	ATLAS BCM 3	ATLAS RD42 7	ATLAS Diamonds 7	ATLAS LUCID 7	ATLAS LUCID 7	ATLAS MMEGAS 6	EUDET 14	DEPFET 6	LCFI 6	SILC 12	ATLAS FP420 7	ATLAS Diamonds 8	ATLAS BCM 2	RD42 7	ATLAS LUCID 13	ATLAS FP420 8	ATLAS 3DSi-Silrr 14	Monopix 8	MMEGAS 7	BCM 3	
T4 -H8	NA Setup 3	3DSi 16	TGCUpgrade 12	ATLAS Gossip 4	ATLAS Gossip 10	ATLAS Gossip 7	MDT Roma 3	MDT Roma 9	MDT Roma 3	STRAW 14	UA9 10	ATLAS RP 5	ATLAS RP-MDT-MPI 13	AMS 3	AMS 19	AMS 28	ATLAS RP 3	ATLAS RP 4	ATLAS RP 7	ATLAS RP 3	UA9 22	NA62 5	NA62 10	NA62 22	
T4 -P0	NA Setup 10	NA62 10	NA62 7				NA62 7	NA62 7																	
T6 -M2	NA Setup 3	COMPASS 17	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 35	COMPASS 32
CNGS	NA Setup 3	CNGS 17	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 35	CNGS 32

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Comments:

- Shift and Compress Schedule by 1 week w.r.t V1.0

SPS Operation

Period 3 2009 Jul 9 to Aug 13

Schedule issue date: 20-March-2009

Version 2.0

(colour code: purple (dark) = scheduling meeting , light green (light) = weekend or holiday)

		Thu 9 Jul	Fri 10 Jul	Sat 11 Jul	Sun 12 Jul	Mon 13 Jul	Tue 14 Jul	Wed 15 Jul	Thu 16 Jul	Fri 17 Jul	Sat 18 Jul	Sun 19 Jul	Mon 20 Jul	Tue 21 Jul	Wed 22 Jul	Thu 23 Jul	Fri 24 Jul	Sat 25 Jul	Sun 26 Jul	Mon 27 Jul	Tue 28 Jul	Wed 29 Jul	Thu 30 Jul	Fri 31 Jul	Sat 1 Aug	Sun 2 Aug	Mon 3 Aug	Tue 4 Aug	Wed 5 Aug	Thu 6 Aug	Fri 7 Aug	Sat 8 Aug	Sun 9 Aug	Mon 10 Aug	Tue 11 Aug	Wed 12 Aug	Thu 13 Aug
Machine		BIG MD																BIG MD																			
NORTH AREA	T2 -H2	8h CMS-SiUp		8h D Lazic				CMS-HCAL										8h Z Fodor		NA61 proton																	
	T2 -H4	8h A Singovski		CMS-ECAL				8h R Wigmans				DREAM				8h I Laktineh		COMPASS-CALO																			
	T4 -H6	8h H Wilkens		ATLAS-LUCID				8h H Wilkens				ATLAS-MMEGAS				8h I Gregor				EUDET		8h M Vos		DEPFET LCFI													
	T4 -H8	8h MDT-Roma		8h S Mouraviev				STRAW				TOTEM		8h W Scandale				UA9 proton		ATLAS-RP H Wilkens																	
	T4 -P0	8h A Ceccucci		NA62																																	
	T6 -M2	8h G Mallot																		COMPASS hadron																	
-CNGS		8h Neutrinos		CNGS																																	

For further information contact the SPS/PS-Coordinator

Remarks

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- The indicated Machine Stops might not be up to date.
 Please consult <http://ab-div.web.cern.ch/ab-div/Schedules/schedule2009.pdf>

SPS Operation

Period 5 2009 Sep 17 to Oct 22

Schedule issue date: 20-March-2009

Version 2.0

(colour code: purple (dark) = scheduling meeting , light green (light) = weekend or holiday)

		Thu 17 Sep	Fri 18 Sep	Sat 19 Sep	Sun 20 Sep	Mon 21 Wk38	Tue 22 Sep	Wed 23 Sep	Thu 24 Sep	Fri 25 Sep	Sat 26 Sep	Sun 27 Sep	Mon 28 Wk39	Tue 29 Sep	Wed 30 Sep	Thu 1 Oct	Fri 2 Oct	Sat 3 Oct	Sun 4 Oct	Mon 5 Wk40	Tue 6 Oct	Wed 7 Oct	Thu 8 Oct	Fri 9 Oct	Sat 10 Oct	Sun 11 Oct	Mon 12 Wk41	Tue 13 Oct	Wed 14 Oct	Thu 15 Oct	Fri 16 Oct	Sat 17 Oct	Sun 18 Oct	Mon 19 Wk42	Tue 20 Oct	Wed 21 Oct	Thu 22 Oct								
Machine																						8			8																				
																						BIG MD																							
NORTH AREA	T2 -H2	8h Z Fodor NA61 proton								8h A Malinin CREAM proton				8h Z Fodor NA61 proton																															
	T2 -H4	CMS-ECAL A Singovski				8h U Uggerhoj												NA63 8h W Scandale UA9 eminus																											
	T4 -H6	8h H Wilkens ATLAS-BCM				8h H Kagan RD42				8h H Wilkens				ATLAS-LUCID								8h H Wilkens ATLAS-FP420																							
	T4 -H8	8h V Plyaskin																AMS hadron				TOTEM				ATLAS-RP H Wilkens																			
	T4 -P0																									8h NA62 A Ceccucci																			
	T6 -M2	8h G Mallot																								COMPASS hadron																			
	-CNGS	8h Neutrinos																CNGS																											

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- H4: still need to find an arrangement for CMS Ecal...

SPS Operation

Period 6 2009 Oct 22 to Nov 23

Schedule issue date: 20-March-2009

Version 2.0

(colour code: purple (dark) = scheduling meeting , light green (light) = weekend or holiday)

	Thu 22 Oct	Fri 23 Oct	Sat 24 Oct	Sun 25 Oct	Mon 26 Wk43	Tue 27 Oct	Wed 28 Oct	Thu 29 Oct	Fri 30 Oct	Sat 31 Oct	Sun 1 Nov	Mon 2 Wk44	Tue 3 Nov	Wed 4 Nov	Thu 5 Nov	Fri 6 Nov	Sat 7 Nov	Sun 8 Nov	Mon 9 Wk45	Tue 10 Nov	Wed 11 Nov	Thu 12 Nov	Fri 13 Nov	Sat 14 Nov	Sun 15 Nov	Mon 16 Wk46	Tue 17 Nov	Wed 18 Nov	Thu 19 Nov	Fri 20 Nov	Sat 21 Nov	Sun 22 Nov	Mon 23 Wk47
Machine																																	
												8														8							
BIG MD																																	
NORTH AREA	T2 -H2	8h Z Fodor																								NA61 phys		8h L Tkachev		NUCLEON			
	T2 -H4	8h M Alfonsi						RD51			8h A Singovski			CMS-ECAL						8h Y Itow			LHCf										
	T4 -H6	8h H Wilkens						ATLAS-3DSi-Silrr						8h M Winter			MonoPix			8h H Wilkens			MMEGAS			8h H Wilker		BCM					
	T4 -H8	8h H Wilkens			ATLAS-RP			TOTEM			8h W Scandale																		UA9 proton				
	T4 -P0	8h A Ceccucci						NA62																									
	T6 -M2	8h G Mallot																												COMPASS muons			
-CNGS	8h Neutrinos																												CNGS				

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