

# Works during the Technical Stop and Planning of the proton and laser beam commissioning during Sept'16

Janet Schmidt

On behalf of the primary  
beam lines coordination  
package



# The coming 3 weeks

- Week 37 (12.-18.9)
  - Technical stop (full week LHC, Wednesday – Thursday morning SPS)
- Week 38 (19.-25.9)
  - Beam commissioning (steering of proton and laser beam)
- Week 39 (26.-2.10.)
  - Beam commissioning (synchronization of proton and laser beam)

# Week 37 – technical stop

- Technical stop (full week LHC, Wednesday – Thursday morning SPS)
- Activities depending on technical stop:
  - magnet heat run (no parallel access)
  - Preparations of BPM front ends (no access restrictions)
- Other activities
  - Intervention on BTV.412350
  - Access for laser inspection follow-up
  - removing waste material and RP check
  - visit with HSE for fire compartments
  - laser tests MPP
  - finalise the fire doors&walls in TT41

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# Intervention on BTV.412350

Issue TT41.BTV.412350

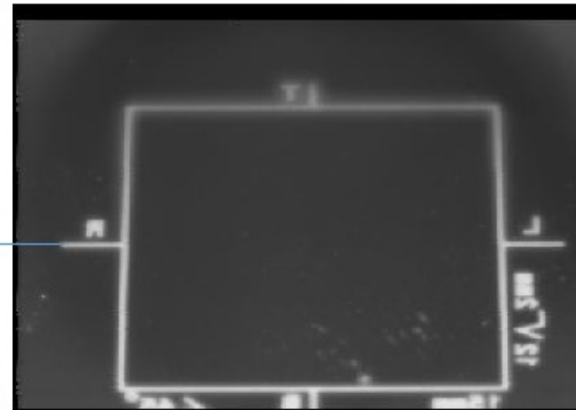
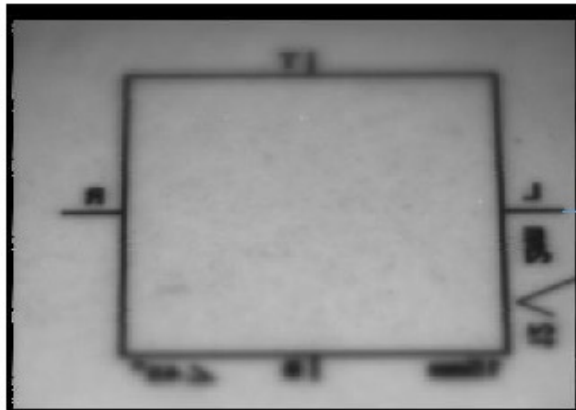
31th August 2016

Screen 1

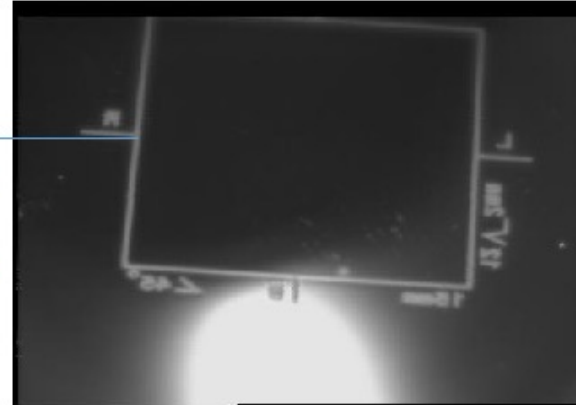
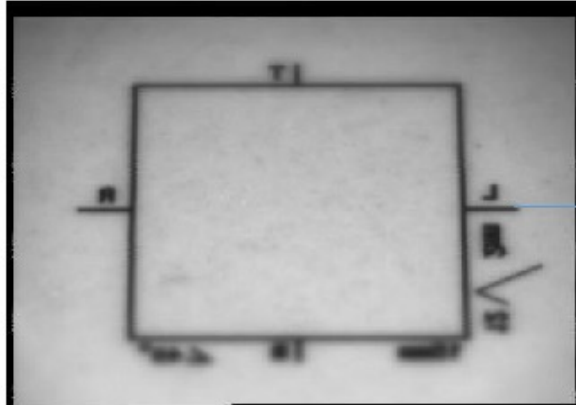
Screen 3

May 13th 2016

August 31th 2016



1.5mm



3.2mm??

+ rotation

# Intervention on BTV.412350

- Situation Friday 9/9/16



# Planning week 37

		LHC technical stop	SPS technical stop			
		Monday	Tuesday	Wednesday	Thursday	Friday
<b>morning</b>	08:00	BTV intervention	MBG heat run test (Jeremie) <b>no parallel access</b>	Works on BPM front ends (Thierry)	Works on BPM front ends (Thierry)	removing waste material and RP check (3h)  BTV intervention?
	09:00					
	10:00					
	11:00					
	12:00					
	13:00					
<b>afternoon</b>	14:00	MBG heat run test (Jeremie) <b>no parallel access</b>	Visual inspection of AWAKE magnets (Jeremie)	Works on BPM front ends (Thierry)	Access for laser inspection follow-up (Valentine) (2h)  work on fire doors (3h)  Laser beam time ( <b>no parallel access</b> )	visit with HSE for fire compartments (2h)  BTV intervention?
	15:00		Works on BPM front ends (Thierry)			
	16:00					
	17:00					
	18:00					
	19:00					
<b>night</b>		MBG heat run test (Jeremie) <b>no parallel access</b>				

# Week 38 – beam commissioning

- Commissioning of BPMs and BTVs
- Proton beam commissioning
- Preparations of synchronized extraction
- Laser and proton beam alignment
- Realignment of equipment to reference trajectory



# Planning week 38 (1/2)

week 38	Monday			Tuesday		Wednesday		
	TL commissioning			TL commissioning		TL commissioning		
	ABT	BI	RF	ABT	RF	ABT	BI	RF
morning	Meeting 9:00 - 9:30			TL steering	preparations for synchronized extraction	Optics, aperture and emittance measurements		preparations for synchronized extraction
	extraxtion (laser mirror on "out" position before)							
	general check	Checks on BPMs (Thibaut) and BTVs (Stephane)						
afternoon	Beam bumps for BPM calibration	Checks on BPMs (Thibaut) and BTVs (Stephane)	preparations for synchronized extraction	Optics, aperture and emittance measurements	preparations for synchronized extraction	go to full intensity		preparations for synchronized extraction
	TL steering						recheck trajectory	
						stability meas		
				Meeting 17:00 - 17:30		Meeting 17:00 - 17:30		

# Planning week 38 (2/2)

week 38	Thursday	Friday
	<b>Alignment protons with laser</b>	<b>Alignment protons with laser, access in the afternoon</b>
	ABT	ABT
	laser	laser
		BI, Misha, Karl
<b>morning</b>	recheck p trajectory define reference positions at mirror and plasma cell	steering of laser beam and protons to common trajectory
		laser mirror alignment
<b>afternoon</b>	sterring of laser beam and protons to common reference trajectory	<b>establish reference trajectory</b>
		Access in TT41 (NO BEAM) realignment of OTR, CTR, streak line
	<b>Meeting 17:00 - 17:30</b>	

# Week 39 – beam commissioning

- Synchronized extraction of proton beam from SPS
- Commissioning of streak measurement
- Synchronization of laser and proton beam
- Tests of signals on OTR/CTR

# Planning week 39

week 39	Monday			Tuesday			Wednesday			Thursday		Friday
	synchronized extraction			synchronized extraction			proton laser synchronization			proton laser synchronization		proton laser synchronization
	RF, OP & ABT	Misha, Karl		RF, OP & ABT	Misha, Karl	BI	Misha, Karl	BI		RF, OP, ABT,laser &BI	RF, OP, ABT,laser &BI	RF, OP, ABT,laser &BI
	Meeting 9:00 - 9:30											
morning	Synchronized extraction from SPS			Synchronized extraction from SPS			check on OTR, CTR signals	Streak meas commissioning		Synchronize proton and laser beam		Synchronize proton and laser beam
afternoon	Synchronized extraction from SPS	check on OTR, CTR signals		Synchronized extraction from SPS	check on OTR, CTR signals	Streak meas commissioning				Synchronize proton and laser beam		Synchronize proton and laser beam
				Meeting 17:00 - 17:30			Meeting 17:00 - 17:30			Meeting 17:00 - 17:30		



# Coordination meetings

- Everything shown here is a **preliminary** planning
- Updates on status and next steps in **coordination meetings** in week 38/39:
  - Glass box in CCC: 874-R-018
  - Monday @ 9:00 – 9:30
  - Tuesday, Wednesday and Thursday @ 17:00 - 17:30
- Check also the **collaboration workspace**  
[https://espace.cern.ch/awake-hwc/\\_layouts/15/start.aspx#/SitePages/Home.aspx](https://espace.cern.ch/awake-hwc/_layouts/15/start.aspx#/SitePages/Home.aspx) for updates