

# NEW SCRAPER presentation



- Eric VEYRUNES

# SUMMARY

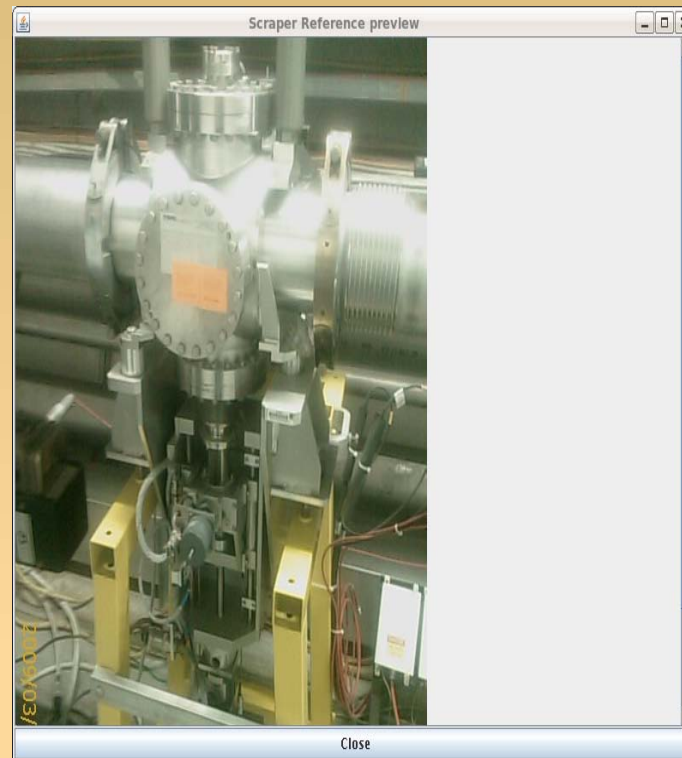
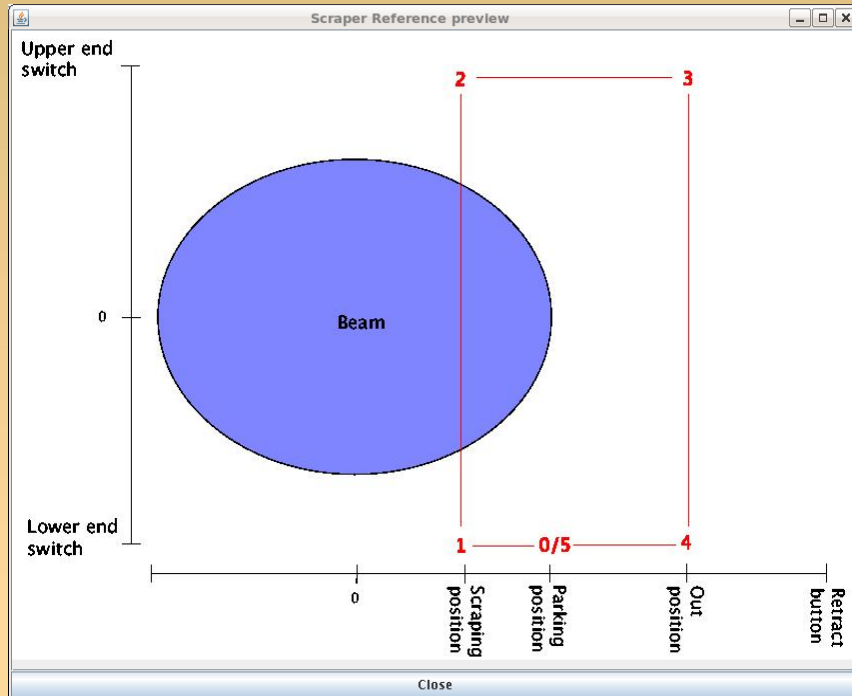
- Where is the scraper
- What is the scraper
- SIS Interlock
- LASER and DIAMON
- Application
- Action on the beam
- TIMBER

# Where is the scraper

- Name : BSHV.51659 (was BOSCREA)
- BA5(-), LSS5, position 51659.

# What is the scraper

- The scraper is used to clean satellites for LHC high intensity beam.



# SIS Interlock

- The SIS interlock to be mask during scraping.

The screenshot displays the SPS SIS GUI interface. The main window is titled "SPS SIS GUI" and has a menu bar with "File", "Operation", "Unlatch all channels", and "Help". Below the menu bar, there is a toolbar with a red stop icon and the text "RBA: spsop". The main area is divided into several panels:

- Filtering Panel:** Contains "Filtering Parameters" with "Pattern:" and "Search:" fields. Below are "Extra Parameters" with checkboxes for "Masked", "Invalid", "Latched", and "Invalid for beam". "Filtering Options" includes "Use RegExps", "Invert filtering", and "Flat' view" checkboxes, along with "Filter" and "Clear" buttons.
- Permits Tree:** A hierarchical tree view showing various interlocks. The "SCRAPPER\_5" node is expanded, showing its sub-components: "SCR5\_H\_FAST\_ENDSWITCH", "SCR5\_H\_SLOW\_ENDSWITCH", "SCR5\_V\_FAST\_ENDSWITCH", and "SCR5\_V\_SLOW\_ENDSWITCH". Other nodes include "SPS\_BTV\_61002\_OUT", "SPS\_COLL\_SCRAPPER\_LSS5", "COLLIMATOR\_519", "COLLIMATOR\_521", "SPS\_RADIATION", and "UA9\_LSS5" with its various detector and goniometer outputs.
- Properties Panel:** Shows the configuration for the selected "SCRAPPER\_5" interlock. The "Id" is "SPS\_SW\_PERMIT.SPS\_COLL\_SCRAPPER\_LSS5.SCRAPPER\_5". The "Mask effect" is set to "(UNDEFINED)". The "logicalConditionDescriptor" is "(SCR5\_H\_FAST\_ENDSWITCH AND SCR5\_H\_SLOW\_ENDSWITCH AND SCR5\_V\_SLOW\_ENDSWITCH AND SCR5\_V\_FAST\_ENDSWITCH)".

At the bottom, a status bar shows "17:41:12 - All channels unlatched". A log window at the very bottom displays a message: "20:50:46 - 2010-06-01 20:50:46,452 [JapcMonitoringExecutor-thread-1] INFO LoggerModule +=> Value received for [SCR50\_Status] value=[received from SCR50S/Status -> Header[fastHendSwitch (boolean):1] -> true".



# Application

SPS CONTROL>SPS Equipment Control>SPS Beam Obstacle>New-Scraper

SPS Scraper v1.0.7 - May. 2010

Jun 01 19:17:08 SPS - LHC2, 01 LHC2 - 01

File References Analyze Help

SCRAPER Status	SCRAPER Settings	
Current User		
LHC2		
Status control		
RETRACT		
Demanded status		
Scraping V	Demanded	Acquired
Current status		
MOVE_TARGET		
SCRAPER Mode		
REMOTE		
SwitchFastV		
OUT		
SwitchFastH		
OUT		
SwitchSlowV		
OUT		
SwitchSlowH		
OUT		
Delay Trigger Fast		
3,000		
Scraper Status	Scraping V	Scraping V
Scraper delay (ms)	3,000	3,000
Scraper h Position (mm)	3	3
Scraper v Position (mm)	3	3
Scraper Park Position (mm)	30	30
Scraper Out Position (mm)	40	40

Acquire Start Monitoring Stop Send

19:17:08 - Scraper updated

# Application

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File References Analyze Help

SCRAPER Status

Current User  
LHC2

Status control  
RETRACT

D demanded status  
Scrapping V

Current status  
MOVE\_TARGET

SCRAPER Mode  
REMOTE

SwitchFastV  
OUT

SwitchFastH  
OUT

SwitchSlowV  
OUT

SwitchSlowH  
OUT

Delay Trigger Fast  
3,000

SCRAPER Settings

	D demanded	Acquired
Scraper Status	Scrapping V	Scrapping V
Scraper delay (ms)	3,000	3,000
Scraper h Position (mm)	3	3
Scraper v Position (mm)	3	3
Scraper Park Position (mm)	30	30
Scraper Out Position (mm)	40	40

Acquire Start Monitoring Stop Send

19:17:08 - Scraper updated.

Motors status

Settings to set and Control : H, V, H and V

Check by a trigger the delay



# Application

SPS CONTROL>SPS Equipment Control>SPS Beam Obstacle>New-Scraper

The screenshot shows the 'SPS Scrapper v1.0.7 - May, 2010' application window. The interface includes a menu bar (File, References, Analyze, Help), a toolbar with buttons like 'RETRACT', 'Acquire', 'Start Monitoring', 'Stop', and 'Send', and a main control area. The 'RETRACT' button is highlighted, and its dropdown menu is open, showing options like 'Set Default Value', 'Save a snapshot', 'Save to Ref. File', 'Browse References', and 'Show Ref. settings'. The 'SCRAPER Settings' panel is visible, with fields for 'Demanded' (IDLE - Stand By), 'Scraper delay (ms)' (5,000), 'Scraper h Position (mm)' (1), 'Scraper v Position (mm)' (1), 'Scraper Park Position (mm)' (20), and 'Scraper Out Position (mm)' (30). The 'Current status' section shows 'IDLE' and 'PARK' buttons highlighted in green. A status bar at the bottom left displays '19:31:26 - Scraper updated'. Several blue callout boxes provide instructions and status information.

**Set correct settings for a new user**

**Scraper control**

**50ms < Delay < end\_FT**

**Position with beam 0 is middle of the vacuum chamber**

**Park : Waiting position for other cycle  
Out : Before Park  
Only positive value**

**Green scraper retracted**

# Application

SPS CONTROL>SPS Equipment Control>SPS Beam Obstacle>New-Scraper

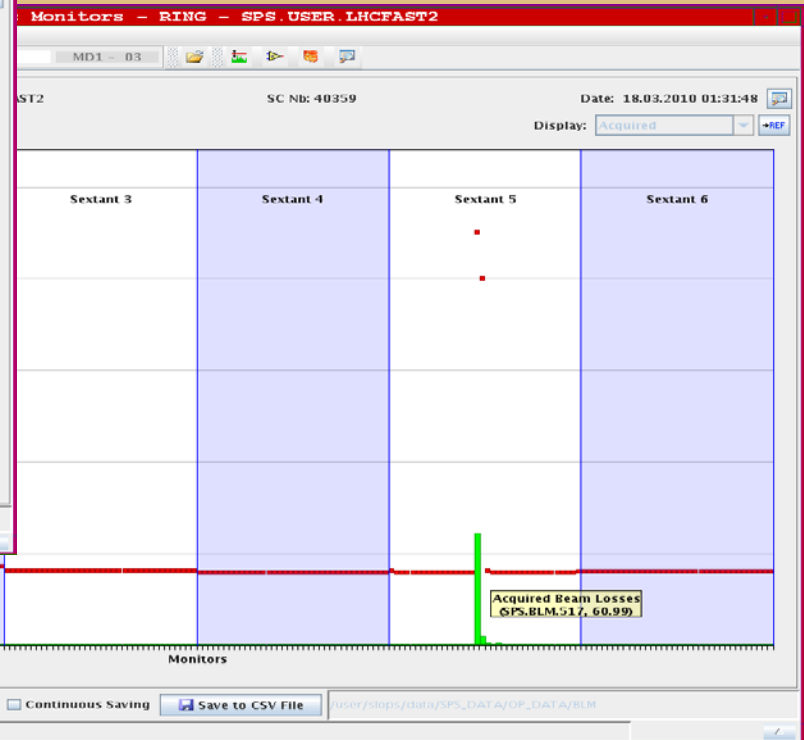
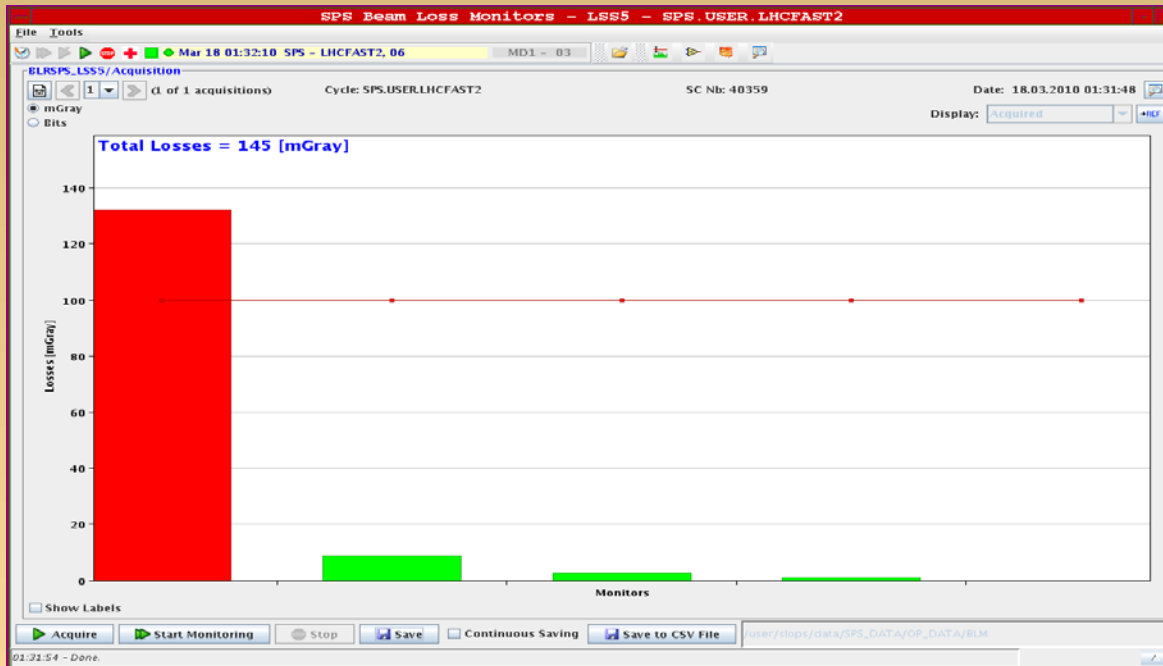
The screenshot shows the SPS CONTROL software interface. The main window is titled "EXPERT DISPLAY" and displays "SCRAPER Acquisition" data. The interface includes a menu bar (File, References, Analyze, Help), a toolbar with various icons, and a status bar at the bottom. The "Analyze" menu is open, showing options like "BCT high resolution", "BCT low resolution", "RLM Panel LSS5", and "Expert Panel". The "Expert Panel" is selected, displaying a table of scraper acquisition data.

	Position	Resolver	Speed	Switch In	Switch Out
Fast H	-18.0	-18.03	0.0	OUT	OUT
Fast V	-18.0	-18.0	0.0	OUT	OUT
Slow H	-19.0	-19.0	0.0	OUT	OUT
Slow V	-27.0	-27.0	0.0	OUT	OUT
<b>Reset</b>	<b>Delay Too short</b>	<b>Scrap Aborted</b>	<b>Scrap Cmd Tim...</b>	<b>Scrap Cmd F...</b>	<b>Steps Lost</b>

At the bottom of the interface, there are buttons for "Acquire", "Start Monitoring", "Stop", and "Send". The status bar at the bottom left shows "19:31:41 - Scraper updated".

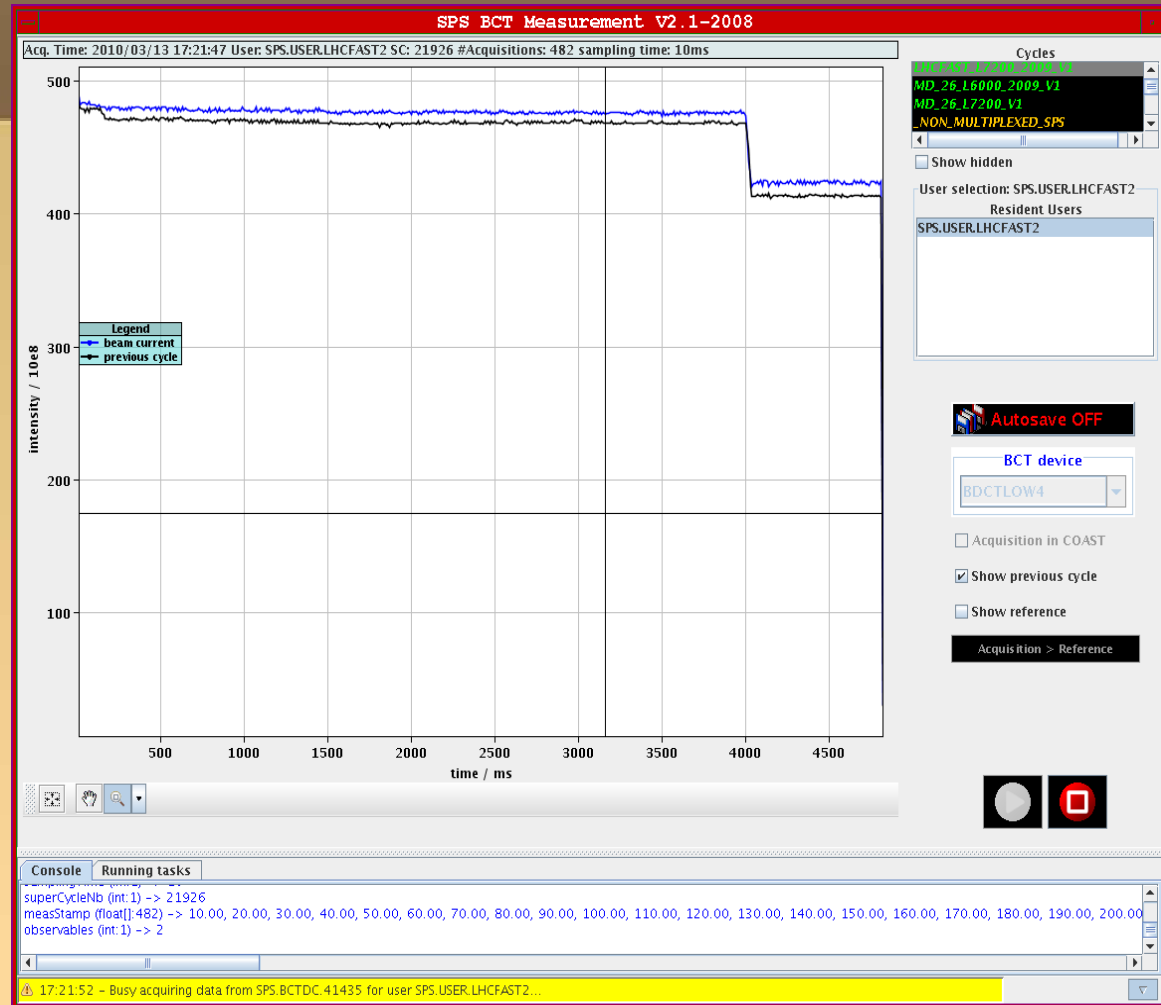
# Action on the beam

## Losses in BLMs BA5 and LSS5



# Action on the beam

## BCT effect



**TIMBER**