

# The beam test of alignment sensors in October 2008 at CERN



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(\* ) Supported by the FP6-Infrastructure I3 European Project EuDET

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# WHAT?


Test new alignment sensors with hadron beam and/or electrons



No EUDET telescope available this time :(

# WHEN? 24<sup>th</sup> Sept (@08:00) - 6<sup>th</sup> Oct (@08:00)

		Thu 11 Sep	Fri 12 Sep	Sat 13 Sep	Sun 14 Sep	Mon 15 WK38	Tue 16 Sep	Wed 17 Sep	Thu 18 Sep	Fri 19 Sep	Sat 20 Sep	Sun 21 Sep	Mon 22 WK39	Tue 23 Sep	Wed 24 Sep	Thu 25 Sep	Fri 26 Sep	Sat 27 Sep	Sun 28 Sep	Mon 29 WK40	Tue 30 Sep	Wed 1 Oct	Thu 2 Oct	Fri 3 Oct	Sat 4 Oct	Sun 5 Oct	Mon 6 WK41	Tue 7 Oct	Wed 8 Oct	Thu 9 Oct
Machine		8							816										8			8								
		BIG MD							MTE&HI CNGS										BIG MD											
AREA	T2 -H2	8h							NA61																					
	T2 -H4	8h					CMS-ECAL		8h					SITRD/PICH					8h			NA63								
	T4 -H6	8h					RD42		8h					CERF		8h								SILC R&D						
	...	8h							8h		8h		8h								8h									

 Machine development ⇒ No beam, though we can still use the area. Sometimes time for MD is shortened

Backup (we need to agree on this):

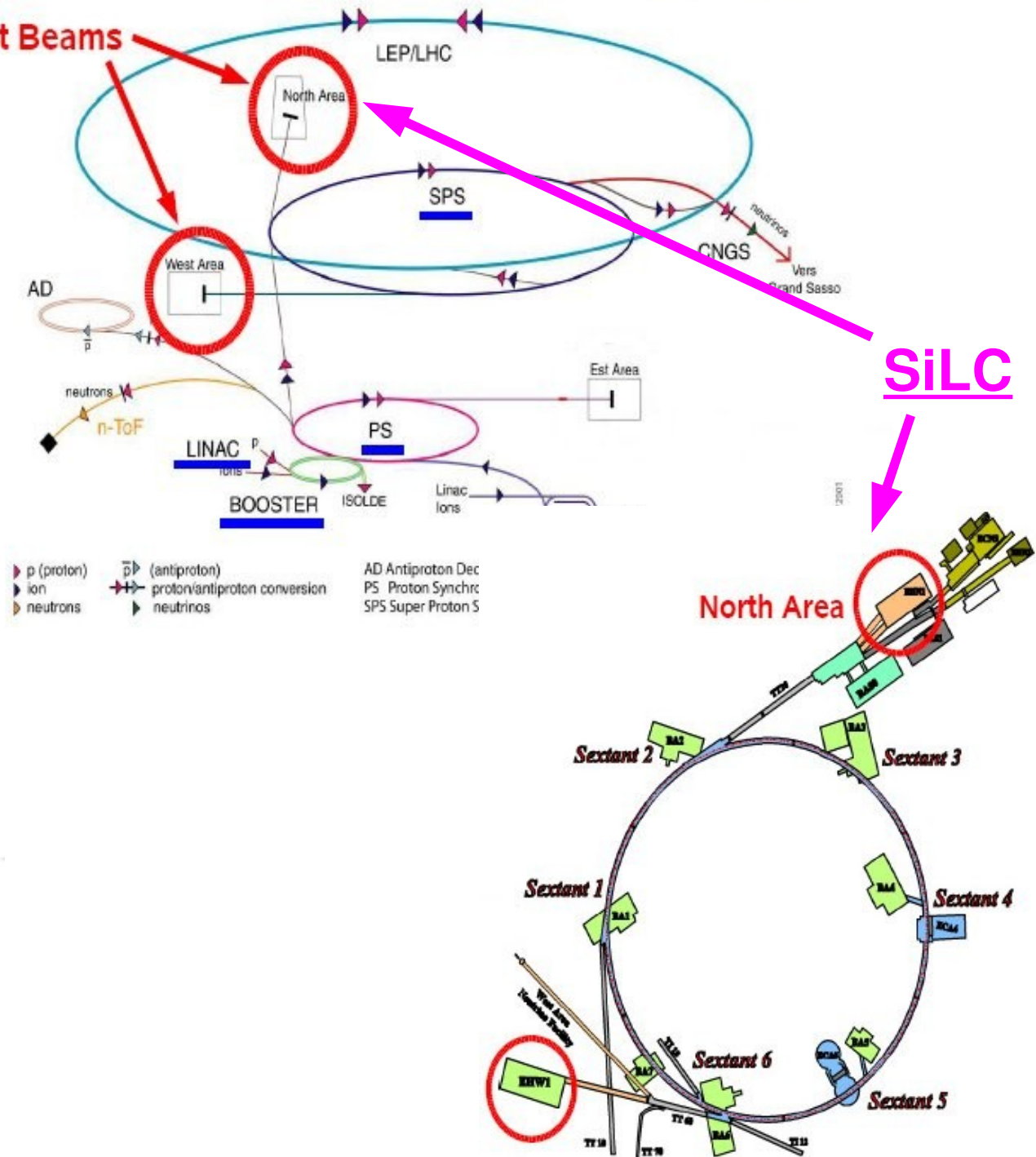
9<sup>th</sup>-15<sup>th</sup> October, H6B parasitic mode of ATLAS in H6A. Contact: Beniamino Di Girolamo

# WHERE?

## Accelerator chain of CERN (operating or approved projects) not to scale

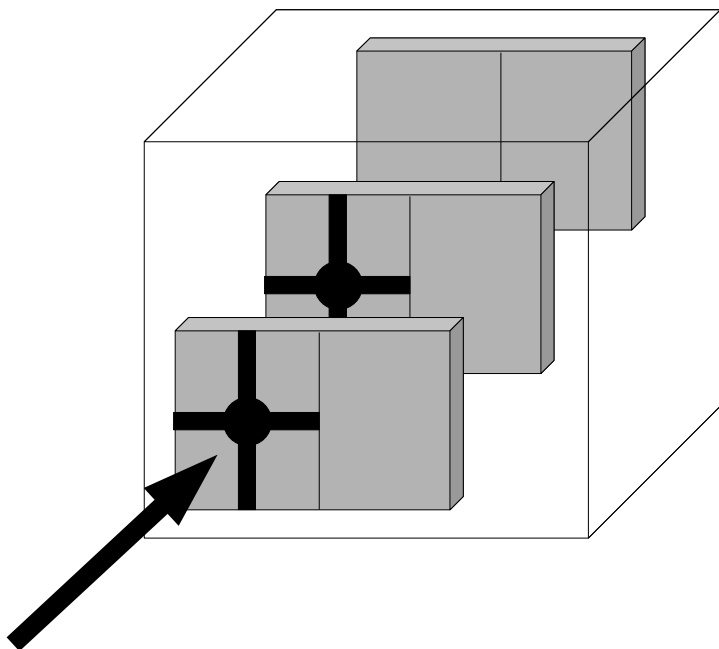
- SPS beam energy:
  - 400 GeV/c (450 GeV/c max)
- Spill (at 400 GeV/c):
  - 4.8 s spill length (at 400 GeV/c)
  - 1 spill every 16.8 s
- Beam extraction to:
  - North Area (Prevezin site)
    - physics + test beams
  - West Area (Meyrin site)
    - test beams only
    - will be closed end of 2004

H6B experimental area



# Aims of the test beam

- Test of **new** Hamamatsu Silicon Microstrip detectors:
  - Based on CMS sensors, but having smaller pitch: 50  $\mu\text{m}$  vs CMS: 80-205  $\mu\text{m}$  with alignment passages etched off



Pions and/or IR beam

- Baseline:
  - 1<sup>st</sup> and 2<sup>nd</sup> module with 2 new HPK sensors.
    - One of them is an alignment sensor
  - 3<sup>rd</sup> module is a reference module (2 or 3 sensors)
  - All equipped with VAs
  - Pion beam scans spot, alignment cross and quadrants  
**We need XY motorized platform**
  - Laser Beam options:
    - 1) IR Beam **inside** the support box  
IR alignment system acts as a stability monitor
    - 2) IR Beam sitting **outside** the box  
We can reproduce global movements of the box  
Optical window + filter opened in the box

- TLU availability??