



# Laser-Setup Status in Genova

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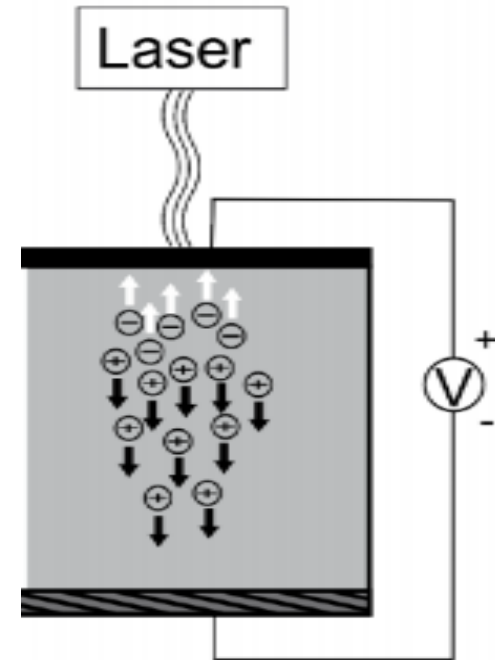
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HV-CMOS Meeting

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# Outline

- ✓ Most of the particles that are detected by the ATLAS pixel detector are MIPs.
- ✓ By traversing the sensor they produce approximately 20000 electron-hole pairs (250  $\mu\text{m}$ )
- ✓ Wavelengths used for our setup is 1060 nm ( $E_\gamma = 1.17$  eV)
- ✓ Deposition like MIPs
- ✓ Useful to find efficiency map of one pixel



## In next slides:

- ✓ SETUP Description
- ✓ First RUN
- ✓ Future Upgrade

# LASER Elements

## ✓ Driver PDL 800-B

Internal oscillator  
40MHz  
Repetition frequencies 40,20,10,5,2.5 MHz;  
External Trigger  
Input Amplitude -5V to +5V Vpp  
Frequency range 10Hz to 80MHz  
Connector BNC



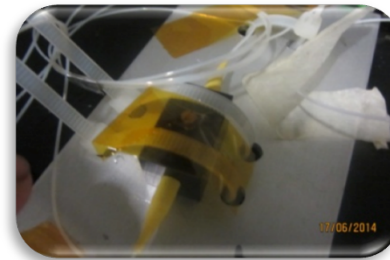
## ✓ Laser Head (class 3B)

LDH-P-1060  
Collimator  
Single mode Fibre, FC connector  
Wave length 1051-nm-1067nm  
Minimum pulse width 44ps



## ✓ Variable attenuator

BB-200-3A3A-1060-S

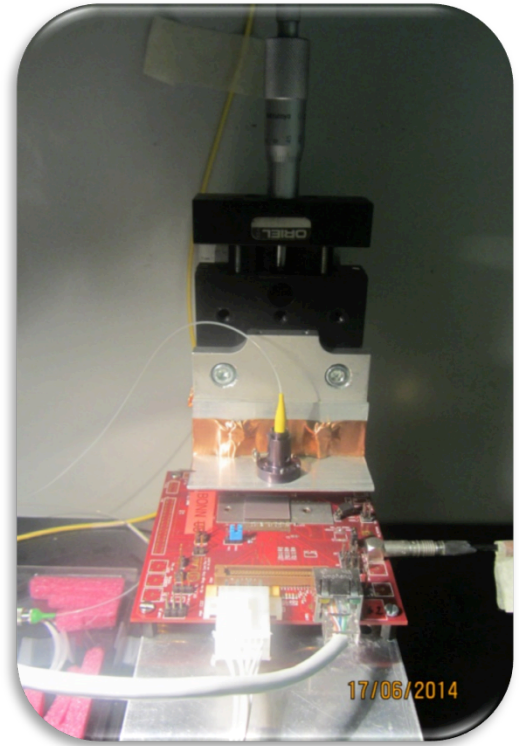


## ✓ Splitter 95/5

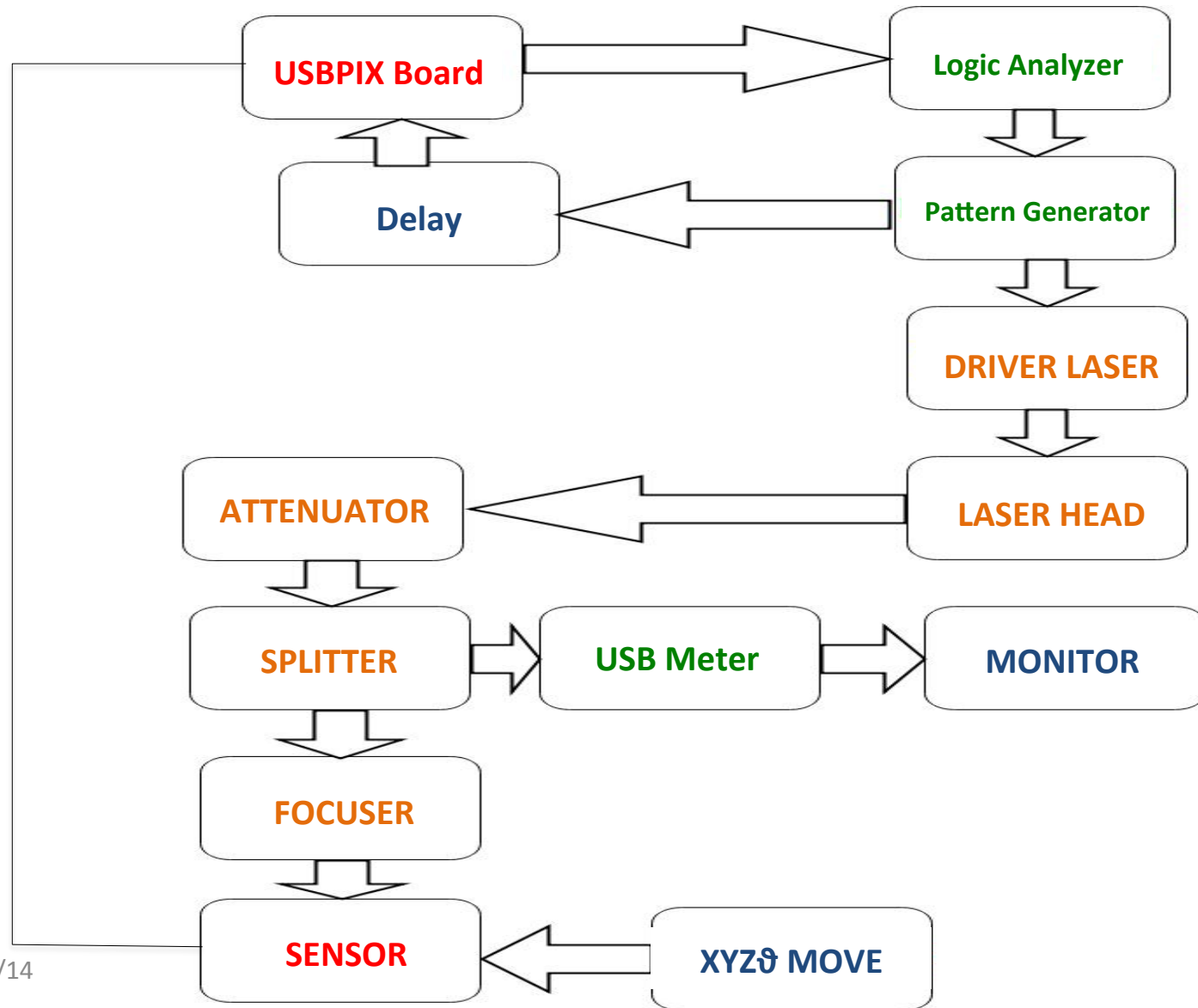
Fused-11-1060-6/125-95/5-3A3A3A-3-1-SM

## ✓ Focuser

Pigttailed with a predicted spot size about 9  $\mu\text{m}$  at a working distance of 12 mm

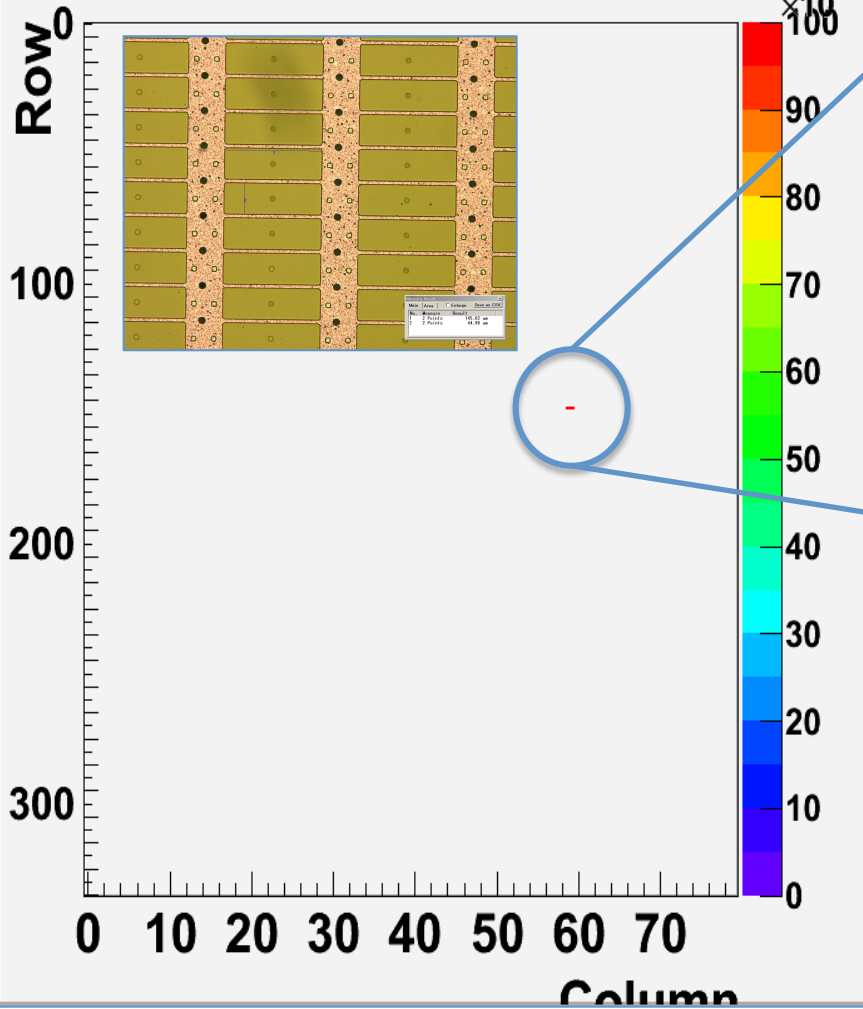


# Setup Schematic

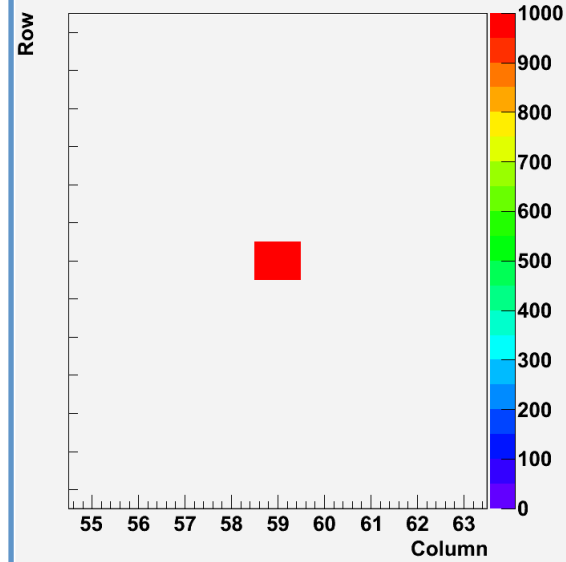


# First Run

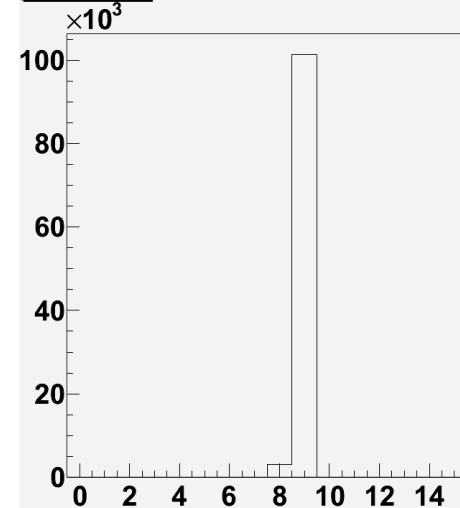
Occupancy mod 0 bin 0 chip 0



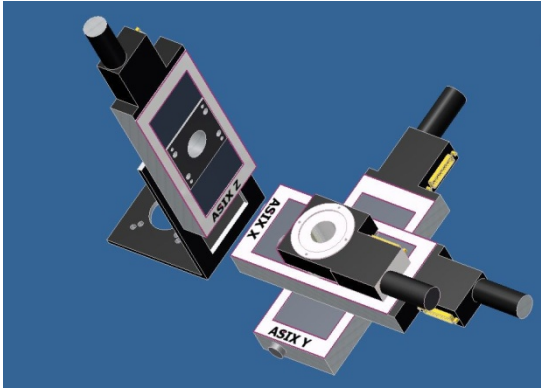
Occupancy mod 0 bin 0 chip 0



ToT mod 0 bin 0



# Future Upgrade



**XYZ Movements**  
**Completely Automated!**

