

## Status production of 3D at CNM

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Silicon detectors with cylindrical electrodes (so called 3D detectors) offer advantages over standard planar photodiodes as more radiation hard radiation sensors. 3D detectors with the double sided geometry have been fabricated at IMB-CNM clean room facilities. The layouts will fit the new pixelated readout chip FE-I4 developed by Atlas collaboration.

The technology and the electrical measurements of new 3D detectors fabricated in silicon substrates 230um thick for the future Insertable b-layer (IBL) of the Atlas experiment. The technological steps necessary for the fabrication of this double side 3D detectors are presented. We have performed detailed simulations including technological and electrical behaviour. By these simulations the optimum parameters for the design and fabrication of these devices have been found. With this information a new mask set has been designed which includes different detector geometries. The first detectors fabricated in the clean room facilities of CNM-IMB in Barcelona are presented together with the preliminary electrical measurements showing full depletion voltage of 5 V and leakage current on the order of nano amperes at room temperature.

**Author:** PELLEGRINI, Giulio (Universidad de Valencia (ES))

**Presenter:** PELLEGRINI, Giulio (Universidad de Valencia (ES))

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