

Y23 : Development of a μ -calorimeter array for wide energy band X-ray astronomy



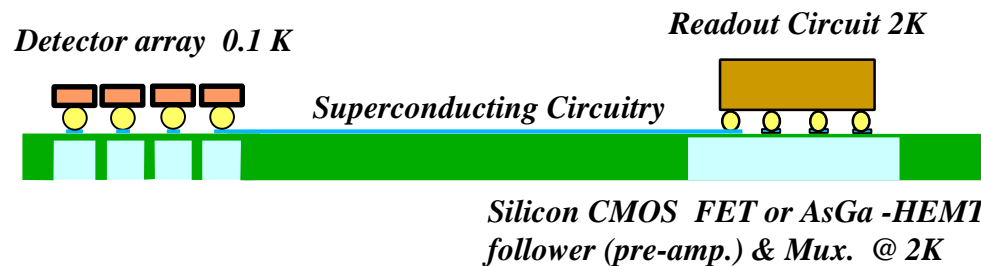
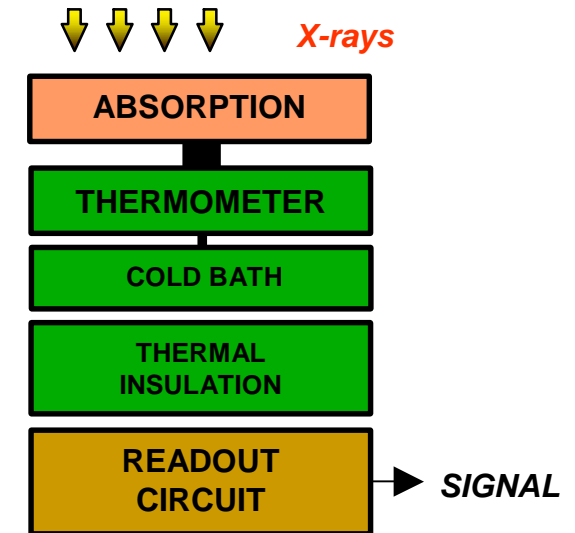
4 μ -calorimeter 2D array

Hybrid structure

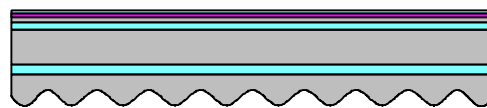
Resistive Mesa Si thermometer

Silicon Micro-etching technology

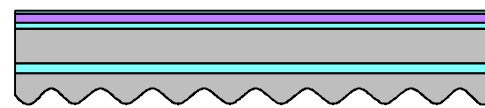
4 Pre-amplifier readout & Mux (near focal plane temperature ?)



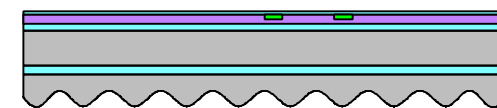
Scheme of the MESA process on a double SOI substrate



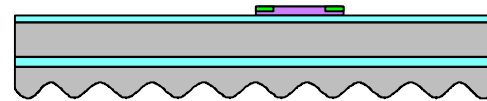
1-Thermometer Implantation



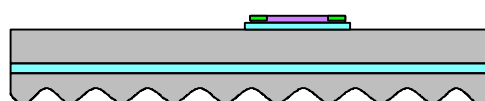
2-Diffusion of the thermometer implantation



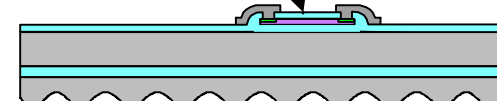
3-Contact Implantation and Diffusion



4-Etching of the Thermometer



5-Etching of the first SOI dioxide

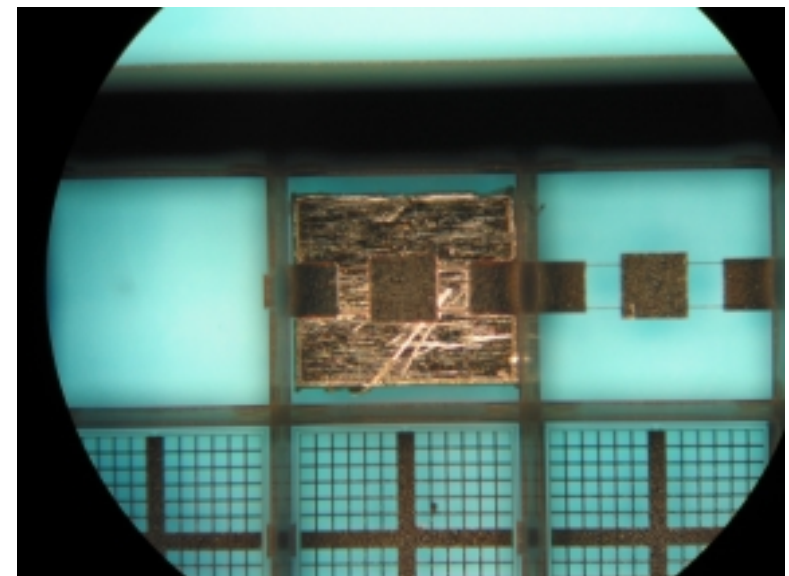
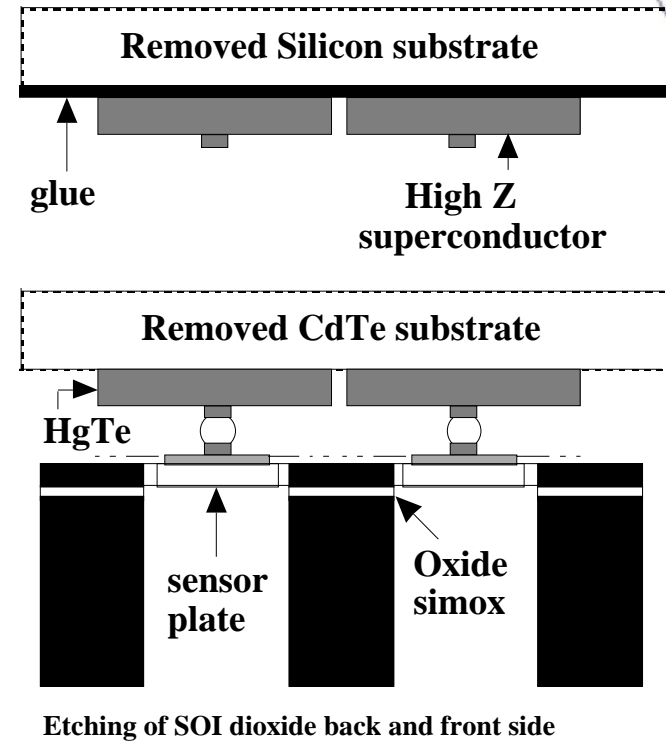
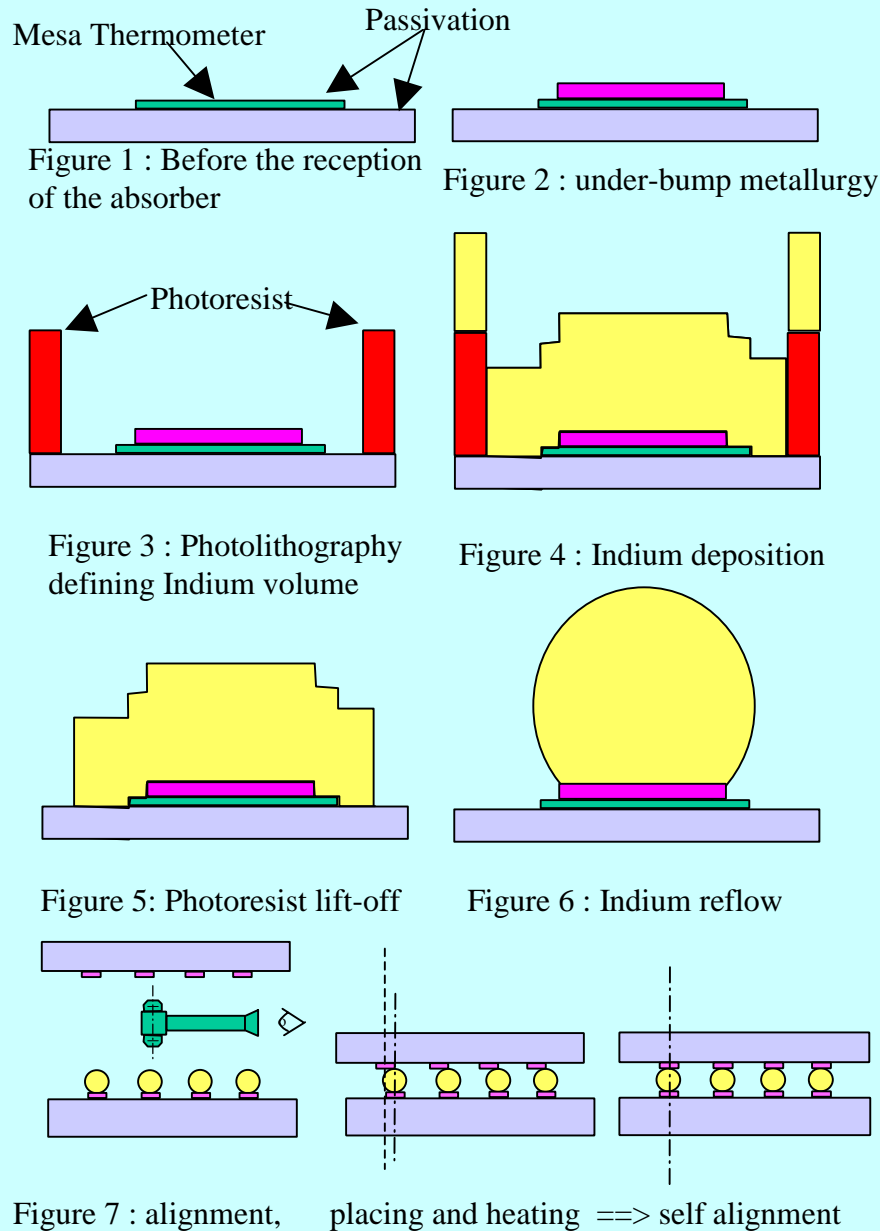


6- Al Deposit and Etching on the thermo contacts.

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Indium Bump Hybridization



25 μ m thick Ta foil glued on sensor plate