

# Omega

## Status of SPIROC

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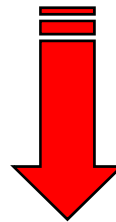
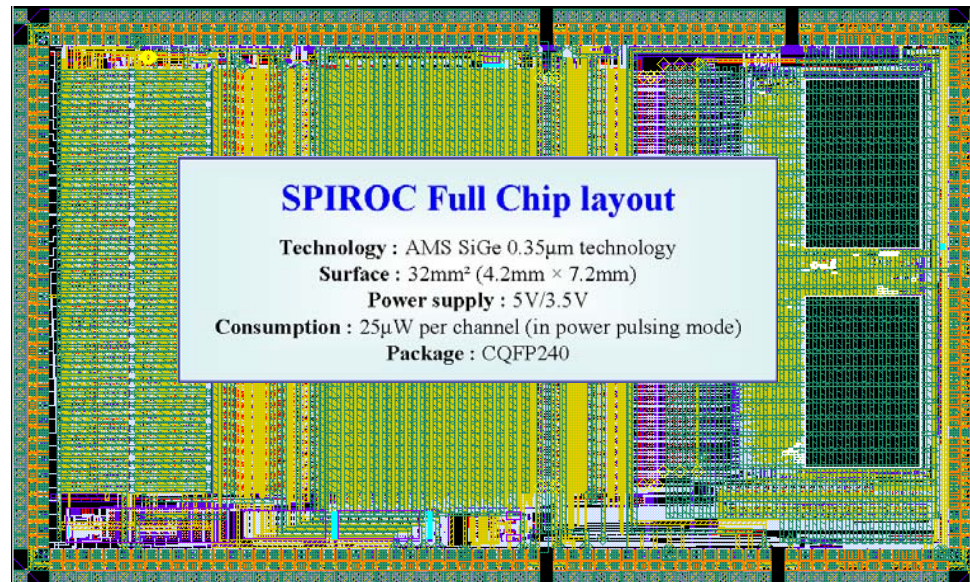
mardi 1er juillet 2008

*Orsay MicroElectronic Group Associated*

- Status of SPIROC1
  - 2 major bugs which need to be corrected : probe, ADC
  - Analog part so far OK, can be used to replace FLC\_SiPM
  - Autotrigger at ~50-100 fC
  - Could be tested with existing detector and DAQ
  - Possibly SKIROC compatible
  - Many more measurements to be done : complex chip

A second iteration is necessary : SPIROC 2

- SPIROC2 prototyped in june 08



submitted on 9<sup>th</sup> June 2008

Delivery expected in September-october 2008

Very conservative prototype which corrects the bugs of the first version and adds light modifications



# Packaging

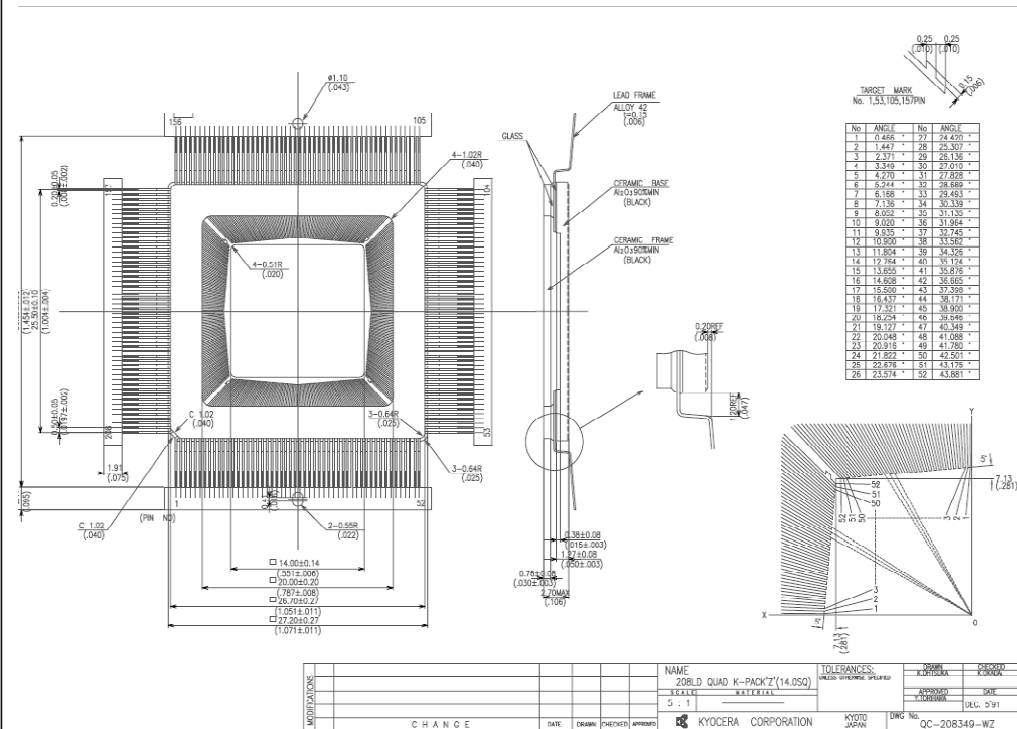
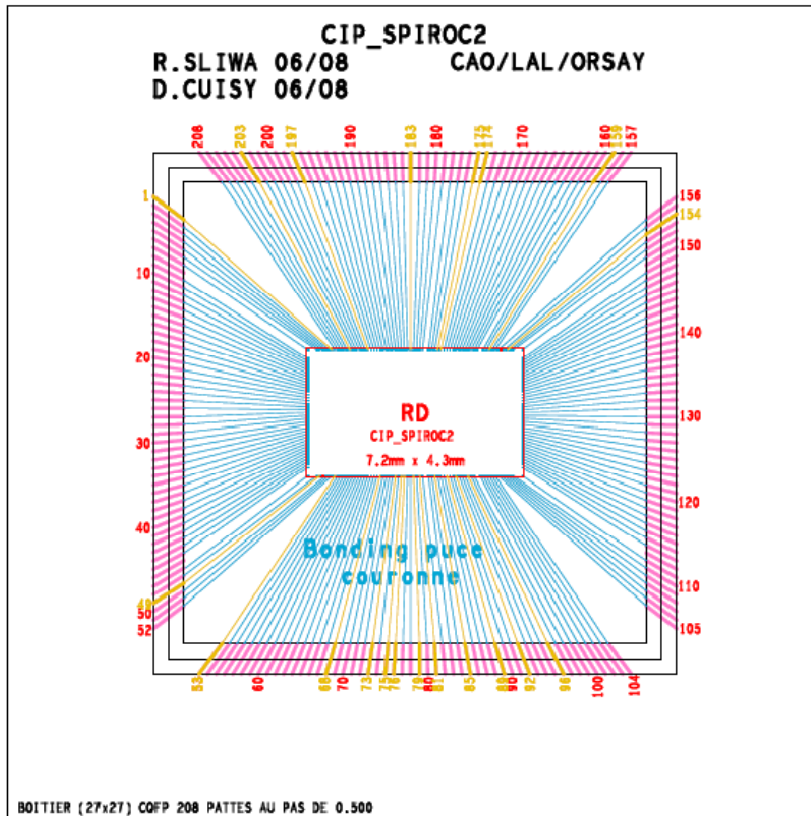


206 pads to connect

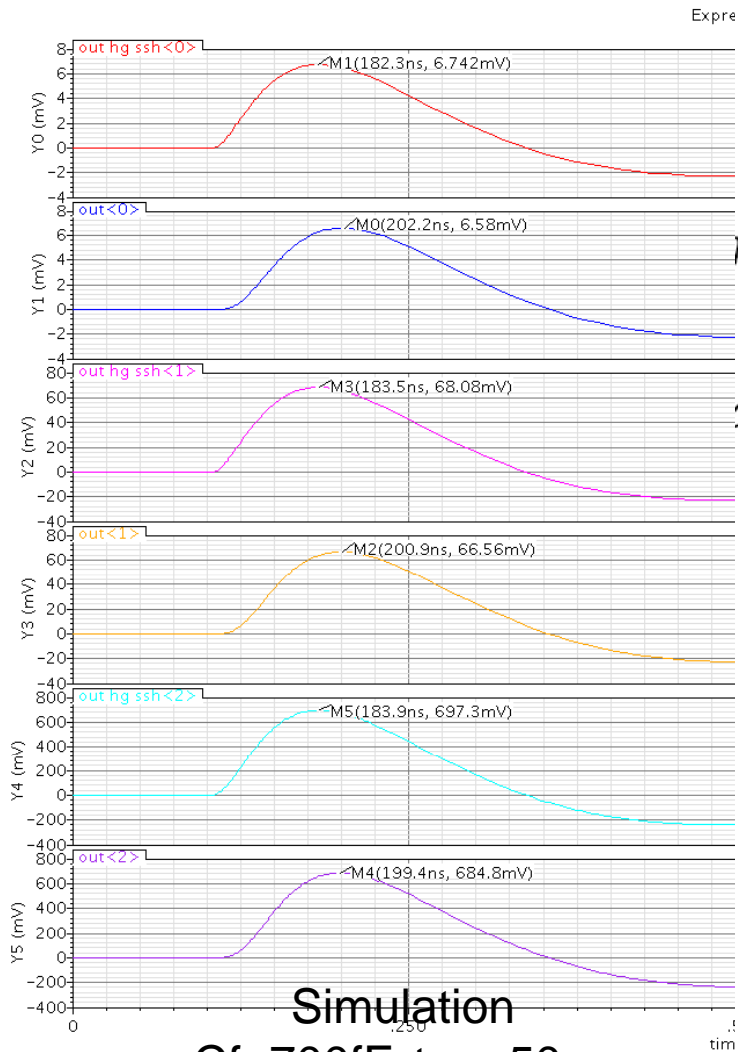


Best candidate for the prototype: TCQFP208

Dimensions:  
27x27x1.4 mm

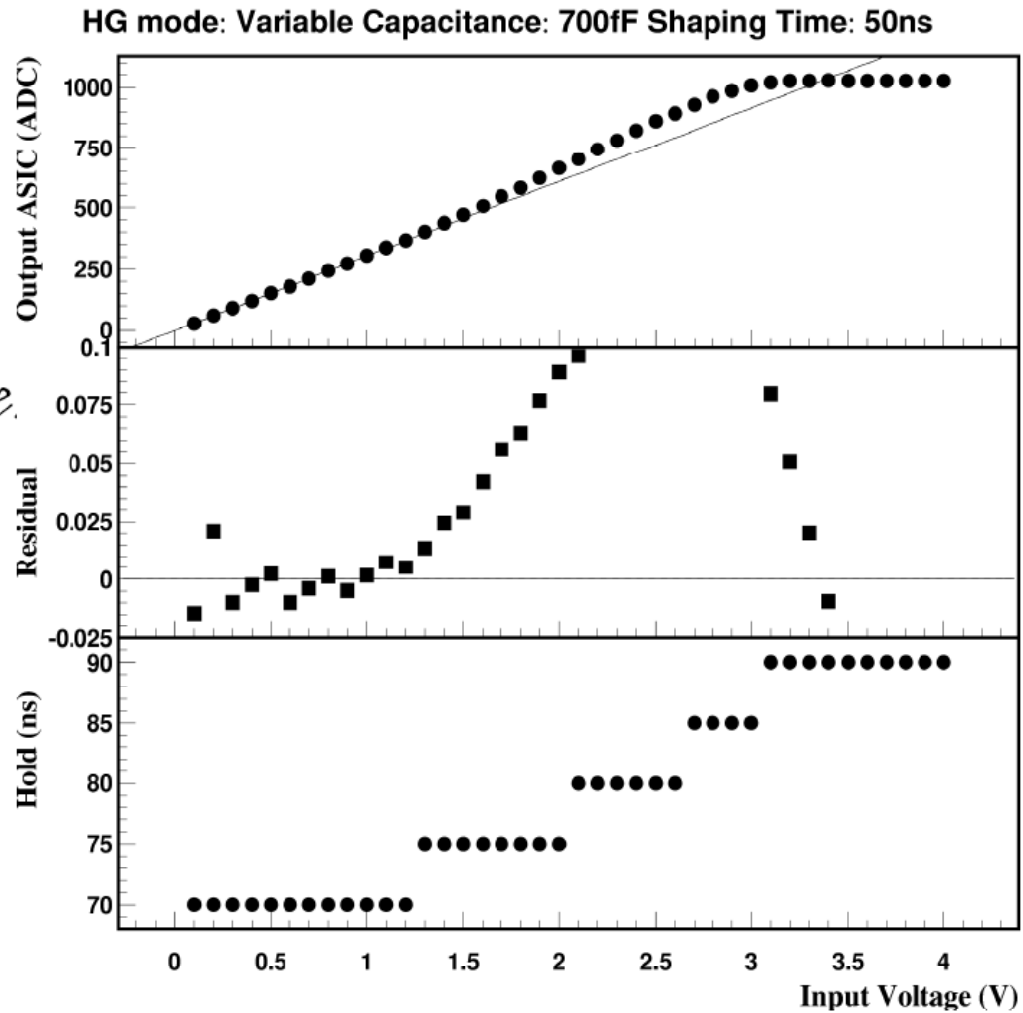


# Linearity



Simulation  
 $C_f=700\text{fF}$ ,  $\tau=50\text{ns}$

2,20,200 pe



DESY  
 measurement

- Status of SPIROC1
  - Many more measurements have to be done on SPIROC 1: complex chip
    - Linearity
    - Noise
    - Trigger Jitter
    - TDC
    - ADC
    - ...
  - SPIROC 1 needs one more prototype before production
- SPIROC 2 layout chip in progress
  - Very conservative prototype
  - Correction of the first version bugs (ADC discri, probe and slow control register)
  - Add some light improvements (in digital part)
  - Packaging: TQFP 208
  - If no major change, production next year