OUTLINE

- **Probe testing at IPHC ?**

Production test : Probe testing at IPHC ?

Functional test
Based on leakage current
Production yield [%]

Wafer 6 inchs
33 MAPS

On-line monitoring

Probe testing

Wafer map

- We may perform this kind of test → we have experience
  - Mimosa 5 (2002 - 2004) ~ 330 chips → 10 wafers
  - MimoStar (Dates) ~ xxx chips → y wafers
- But we don't have huge experience & practice in this field
  - Theses test are done by our Micro-Technique Team
    - Two probes stations + Manpower to handle them
    - They have experience in testing ASICs for ALICE & STAR
  - We (IPHC) never setup a test " at 160 MHz " on a probe station
    - Maximum frequency we used was 10 MHz → We need to study
  - But LBNL has done tests at 160 MHz on Phase 1, 2
    - The collaboration LBNL + IPHC has the experience
- Can we perform a functional test without running at 160 MHz ?
  - Provide 160 MHz clock but don't acquire output data
  - Power consumption measurement → Vddd & Vdda
    - Find nominal values with a sample of few Ultimates mounted on PCB
  - Check if we can configure Ultimate by JTAG
    - Measure power consumption when Ultimate is running