

# Forward Tracking Disk Subdetector

**J. Duarte Campderrós\***, *M. Vos*<sup>†</sup>, *A. Ruiz*<sup>\*</sup>, *D. Moya*<sup>\*</sup>, *I. Vila*<sup>\*</sup>

\*IFCA - U.Cantabria/CSIC

<sup>†</sup>IFIC - U.Valencia/CSIC

ILD Software and Integration Workshop at DESY  
Hamburg, Germany  
July 6-8 2010

- Status of FTD mechanical design
- New FTD mechanical design
- Modification to FTD Mokka driver

## Current Status

- Simplistic FTD description in Mokka
  - All surface is sensitive detector, no petals, no structure
  - Simplified supports, cabling, no services, ...
- ... Due to missed detailed design

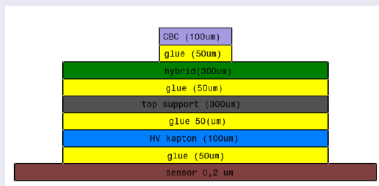
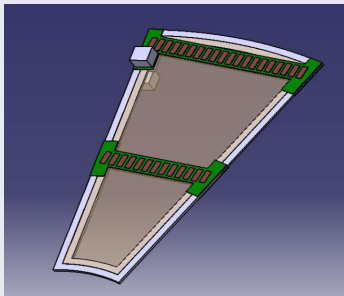
Now have a more realistic design (see yesterday's talk of Matthieu Joré in the Integration parallel for details)

# FTD Design

New design

## FTD Module Design

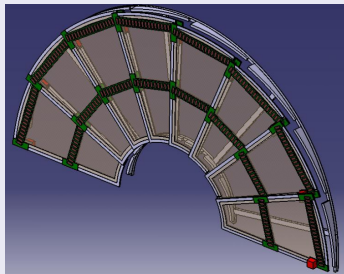
- Front-end electronics to be defined
- 4 sensor by petal, 2 sensors by side in stereo angle ( $\pm 6^\circ$ )
- Sensors in 6" wafer
- Sensor glued on petal directly



Different sensor size depending of the FTD disk and position in the petal

### FTD Cabling and Structure

- Petals assembled in a ring shape support structure
- 1 HV cable per sensor
- 1 supply cable per DC-CD converter (12V)
- 1 output (1-2 V) connector per DC-DC containing 2 cables for 2 hybrid



### To be implemented in Mokka database

- New detailed description of FTD
  - More realistic module design
  - Estimations of cabling and Routing
  - FTD Disk supports
  - ...
- Have to include the new description in Mokka database
- Update the FTD Mokka driver to include the new complex structure (petals,...)

- Available new FTD design
- We intend to include in Mokka database
- And modify the FTD Mokka driver to manage the new complexity