

## Minutes of USC Instrumentation meeting on 06-05-2010

**Present:** J. Caride, J. Visniakov, P. Vázquez, E. Pérez, A. Gallas, J. Saborido, B. Adeva, P. Rodríguez.

### **1) DEPFET**

#### Outcome of DEPFET meeting in Ringberg (Germany) (P. Vázquez)

DEPFET meeting held from Monday to Wednesday this week. Prague group presented a long report about their activities in the analysis of the test beam data. Apparently they have done everything of interest. There is an ongoing discussion between Valencia and Prague about the analysis. They pretend to publish a paper with the results from 2008 and 2009 test beams. The variation of the gain of the detector with the bias voltage, a topic that USC wanted to analyze, has been already studied by this Prague group. They use a stand-alone analysis code, different from the one use the rest of the DEPFET collaboration. The latter is embedded in the ILC software and simulation framework. The ILC analysis software is missing the implementation of the gain corrections across the sensor. The Prague group obtained resolutions of approximately one micron per detection plane. The results using the ILC framework are compatible with that.

The test-beam will happen in November. It will last for a week. The plan is to run parasitically in the EUDET telescope. The aim is to test the new matrices (PXD6) with a thickness of 50 microns. These matrices are more suitable for Belle. The pixel size would be 50 x 75 microns. As well new readout chips will be used DCDB.

In September we will receive the new transistors for irradiation. Several parameters have been modified (thin oxide, etc...).

#### Irradiation activities status at Santiago (E. Pérez, P. Vázquez):

Bonding finished. Testing needed. Some adaptor cards have to be produced. Next week we will start the irradiation.

#### Status of DEPFET Test-beam Analysis (J. Caride):

Javier presented the status of the analysis. He is not getting the same results that the rest of the collaboration is getting. He explained better the experimental setup with graphs. Still work has to be done.

#### Status of DEPFET tests at Santiago (J. Visniakov):

No new results. Waiting to get a working PXD5 matrix in good working conditions. No results or news from Bonn people.

#### Status of Belle LV design prototype (P. Vázquez, J. Visniakov):

FPGA evaluation board ordered. In two weeks from now the board will be in Santiago.

The goal is to build a prototype of the LV distribution system that will be used in the test beam in November.

A new group from Germany joined the WP. They are leading the LV Work Package.

Fernando Arteché attended the meeting in Germany.

## **2) News from collaboration with CNM on thinning of 2D pixel sensors. (Abraham 5min)**

A. Gallas reported on the status of the thinning project with CNM. The bump bonding tests with 200 microns dummies were not successful. The sensor bends and none of the bumps gets glued to the chip. Tests are on going. These are not good news since we want to put this thin sensor in the test-beam in May.

## **3) PR01 tests and preparation for the next test-beam in May)**

A. Gallas showed the results on the tests performed so far for the PR01 detector. Results in the presentation in the instrumentation twiki.