

Minutes of USC Instrumentation meeting on 17-06-2010

Present: J. Caride, J. Visniakov, P. Vázquez, E. Pérez, A. Gallas, A. Pazos, P. Rodríguez, D. Esperante, B. Adeva.

1) DEPFET

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

There are 3 chips. We instrumented 30 transistors in all of them but in one (called the dummy) in which we instrumented only 28. After some testing we found out that:

DUMMY: 10 BROKEN OUT OF 28 (18 OK)

CHIP1: 15 BROKEN OUT OF 30 (15 OK)

CHIP2: 8 BROKEN OUT OF 30 (22 OK)

Further investigation showed that if we not power the internal gate of the MOSFET we could power more transistors so the previous numbers are now:

DUMMY: 10 BROKEN OUT OF 28 (18 OK)

CHIP1: 3 BROKEN OUT OF 30 (27 OK)

CHIP2: 1 BROKEN OUT OF 30 (29 OK)

The irradiation campaign will start on 22nd June. Temperature, pressure, humidity will be monitored and recorded at all times. After each step of irradiation we will perform the measurements of the devices in the bunker.

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

Two voltage regulators (LT1185 negative and LT1763 positive) were bought last week and are being tested on the old LHC testboard. A cable of 20 meters with cross section 0.20 mm^2 is going to be used. J. Visniakov and J. Caride have attended an EVO meeting with the Belle II working group last week. Ivan Perich has made some suggestions in the design of the LV powering system like schematic of getting low voltage Vampow (0.35V), proposal of taking Vsource voltage (7V) as reference line for the regulators of all DEPFET and Switcher voltages, also put some circuits of design to avoid current loops (See details in the presentation uploaded by J. Visniakov in this meeting).

FPGA evaluation board arrived at Santiago finally. (P. Vazquez). J. Visniakov will attend webinar on "Power Management with SmartFusion (FPGA)" next week (23.06).

J. Visniakov will ask again Christian about a new working PXD5 matrix to resume the tests at the USC. This matrix will be used as well in the commissioning of the prototype for the LV distribution system.

November still holds as the date in which the DEPFET test beam will take place. At this moment is not sure whether the test beam will be made with PXD6 or PXD5 matrices.

Status of DEPFET Test-beam Analysis (P. Vázquez):

The analysis of the test-beam data has been finished by the Czech group as well as the rest of the depfet collaborators (german, etc...). P. Vázquez did not find tasks that J. Caride can pursue alone. P. Vázquez announced that J. Caride is not going to pursue the analysis of the test-beam data and is now working with J. Visniakov in the design and production of a prototype for the Belle II LV powering system.

2) PR01 test-beam in May preliminary results (P. Rodríguez)

Although in the beginning we thought that the data taken during the weekend 5th - 6th June were not ok in terms of the information from the TimePix telescope, it turns out that is recoverable and usable. P. Rodríguez presented the status of the analysis of the data taken before the shutdown (See details in the presentation uploaded by P. Rodríguez in this meeting)