**Belle II PXD EVO Meeting**

14.12.2010

Present:

Carlos Mariñas, Hans-Günther Moser, Soeren Lange, Martin Ritter, Laci Andricek, Peter Kodys, Igor Konorov, Christian Kiesling, Mikhail Lemarenko, Ichi Kishishita, Oksana Brovchenko, Susanne Koblitz, IEKP Karlsruhe, Raimon Casanova, Sergey Fourletov, Zbynek Drasal, Zdenek Dolezal, Andreas Moll, ....

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| |  |  |  | | --- | --- | --- | | 10:00 | Status DEPFET PXD6 production (cancelled) (20') | Rainer Richter | |

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| |  |  |  | | --- | --- | --- | | 10:20 | Report: E-module (20') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=2&materialId=minutes&confId=1047) Minutes](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=2&materialId=minutes&confId=1047) [pdf file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=2&resId=0&materialId=minutes&confId=1047)  ) | Laci Andricek | |

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| |  |  |  | | --- | --- | --- | | 10:40 | AOB (20') |  | |  | * DPG Meeting (15')  |  | | --- | | - group report PXD DAQ  - buffer management algorithm in FPGA  - DEPFET talks?  - ASIC talks  - more | |  | |  | * next PXD DAQ workshop (15')  |  | | --- | | proposal:  9.06.2011 (Thursday) or  10.06.2011 (Friday) | |  | |  | * next EVO meetings (15')  |  | | --- | | January 11, 2011 ?  January 25, 2011 ? | |  | |

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(http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=1047)

Christian brought us very sad news: Henryk Palka, member of the DEPFER collaboration, suddenly passed away yesterday. Our sincere condolences to his family and to the whole Krakow group.

1. **Status: DEPFET PXD6 prduction (Rainer Richter)**

Rainer was ill, will be presented in the next meeting. The important news is that the yield problem (metal 1 shorts) has been solved, the remaining wafers have been processed by now up metal I and ZMI with no shorts measured.

1. **Report: E-Module (Laci Andricek)**

Laci reported on a meeting (last week in Mannheim) to define a project to build an electrically functional half ladder (module with ASICs but no DEPFET functionality). This is aiming for:

* Check circuitry, routing and space for components.
* Check signal integrity, voltage drops, cross talk, resistivities.
* Practice the 3-metal system.
* Practice interconnections (flip-chip, Kapton).

Planned is to use the geometry of an inner module (Discussion: outer is the worst case – longer metal lines – so better to use this).

Use SwitcherB, DCDB, DHP 0.2 (final DHP will not be ready)

For more details one has to wait on the new EOS layout needed for the larger Kapton flex (see below).

Switcher: can the module be segmented to allow different gate voltages for the switchers (still discussed), alternatively one can implement regulators in the switcher.

More details are in the minutes of the Mannheim meeting (available this meetings indico page).

Discussion: the Kapton flex width will be increased to 10mm. This implies a difficult re-design of the module and support structure which be done before the Bonn meeting. Since the production of the E-module will not start before Easter there is no conflict.

1. **AOB**
   * Mechanical dummies (thin) will be needed for the mechanical/thermal mock-up (Half shell, inner & outer). Because of the change of the Kapton flex width, the design will not be ready before April 2011 (Forward: March, backward: April).

Laci will then produce such dummies (only Si + etching, no Al), which can be done fast (~ one month).

* + Giessen proposes two presentations at the DPG. Sören asked if there are any rules concerning the authors. The recommendation was: main author (presenter) & co-authors & ‘for the DEPFET collaboration’.

Since the DEPFET collaboration author list has to be updated, Christian Kiesling will create a file (latex) with all members and put it on the web.

* + Other German institutions will submit abstract to the DPG, too (Karlsruhe on cooling , Munich on irradiations, signal simulation, background, mechanics). It was agreed that the abstracts will be collected by Christian Kiesling and put on the web.
  + The DEPET DAQ workshop will be June 8/9. At this workshop the decision on ATCA or PC based system will be taken. Intermediate meetings will be in April (B2GM) and May (Ringberg). Originally the decision was due in April, but this was difficult to organize. Since it is not time critical, June is fine as well.
  + Karlsruhe has tested the cooing blocks with Si-dummies and thermal load. With 96W/half block a Si temperature of -10deg (within specs) was reached, with a CO2 pressure of 12 bar (corresponding to -35deg block). This is already promising. With better machined blocks and higher conductive materials a smaller gradient can be reached.

The Si was mounted using thermal grease, which was needed because of the poor mechanical quality of the blocks. The grease is CMS proof and no problems are expected.

* + In order to complete the material database Peter Kodys needs to know the thickness of the switcher chips.
  + Next meeting: January 18, 2011, 10:00