**Belle II PXD EVO Meeting**

21.11.2010

Present:

Hans Krueger , Carlos Mariñas , Philip Pütsch , Bartlomiej Kisielewski , Zbynek Drasal , Andreas Ritter , Shuji Tanaka , IEKP Karlsruhe , Jelena Ninkovic , Ichi Kishishita , Christian Koffmane , Stefan Rummel , Mikhail Lemarenko , Laci Andricek , Zdenek Dolezal , Andreas Wassatsch , Norbert Wermes , Manuel Koch , Zbynek Drasal, Susanne Koblitz, Rainer Richter, Hans-Günther Moser.

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| **Wednesday 10 November 2010** | [top[top](http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=1020#top)](http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=1020#top) |

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1. **Cooling Update (Carlos Marinas)**

More parts for the cooling mockup have arrived. Especially the cooling/mounting blocks made in 3D rapid prototyping are ready. They are very similar to the Munich ones, but have two mounting holes, so the old dummy ladders with the wrong position hole can be used as well. In addition their thickness has been increased, so that the surfaces can be polished. The blocks are intended for one phase cooling, but can also work with CO2

Four parts were made, using different methods of the laser sintering. At least

one is antimagnetic.

Furthermore the dummy beam pipe (with cooling), support rings and PVC endcaps are ready as well.

The CO2 cooling plant is operational. It has been used to cool pedals for the ATLAS upgrade, and the required temperature of -25deg could be reached easily.

Question: does the company doing 3D rapid prototyping offer other materials than stainless steel: Yes, it offers a steel/copper alloy. Since this material has a better heat conductivity than stainless steel it was decided to make prototypes as well.

Actions: Carlos to contact Immanuel Gfall about the outer shell. Immanuel is presently designing one.

The Valencia cooling blocks should go to Munich for pressure tests. This can only happen once K. Ackermann is back from KEK in two weeks. Hans-Jürgen Simonis suggested testing them with CO2 nevertheless, provided they can be operated in a shelter.

1. **Agenda PXD Session at B2GM**

The draft agenda was discussed:

Agenda PXD session B2GM, November 2010-11-09

1. SOI status Y. Arai 20min 13:30 tbc
2. DEPFET general C. Kiesling 20min 13:50 tbc
3. DEPFET status J. Ninkovic 30min 14:10 ok
4. ASICs H. Krüger 30min 14:40 ok

will include information on DHH algorithms (pedestal update) and slow control needs

1. DHH I. Koronv 15min 15:10 ok
2. Power S. Rummel 15min 15:25 ok

Support/cooling C. Lacasta 30min 15:40

Will be given via EVO by Carlos Marinas in the common mechanics session

1. Performance Z. Drasal 30min 16:40.

Should also include simulations of thin sensors by Benjamin Schwenker

1. **AOB**

* Hans Krüger asked for a discussion about MC events for DHP studies. The presently existing files are not enough (not enough data, no information on MC truth?). He proposes a special meeting after the B2GM of possible users and MC experts (Action!)
* One module wit PXD5, Switcher B and DCD-B for the test beam next week is working. Another (spare) module is being assembled.
* From the 6 wafers which are presently processed (Metal I & II) two will be spared to be processed later for DHP use.
* Laci Andricek proposed to build an electrical dummy module with all electronic components but DEPFETs. This could be used to test how well such an all-silicon module (basically a sort of advanced Multi Chip Module on Silicon as a substrate) is performing and would show us what the limitations are and where we have to improve before we build the final ladders. We would also practice the assembly of such a ladder.

It could have all the ASICs on, three metal layers - including Cu -, and the off-module interconnection as well as the power supplies as close as possible to the final module. It could even be thinned, if needed.

He would like to meet on Dec 6 or 7 in Mannheim to discuss how such a thing can be done, what parts are or will be available on what time scale, and finally how to design it to perform the most relevant tests (Agreed).

* Next meeting: November, 30, 10:00