**Belle II PXD EVO Meeting**

26.7.2011

Present:

 Laci Andricek; Tobias P. Kleinohl; Andreas Wassatsch; Hans Krueger; Soeren Lange; Carlos Mariñas; Pablo Ruiz Valls; Philip Pütsch; Jelena Ninkovic; Arantza Oyanguren; Andreas Seiler; Christian Koffmane; Frank Simon; Jochen Knopf; Shuji Tanaka; Peter Kodys; Andreas Moll; Sergey Fourletov; Julia Furletova; Stefan Rummel; Ariane Frey; Igor Konorov; Peter Kvasnicka; Ivan Peric; Tomasz Hemperek;

 Victoria Castillo; Hans-Günther Moser; Rainer Richter

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| **Tuesday 26 July 2011** | [toptop](http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=1331#top)  |

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| 10:00 | News from B2GM and other business (20') ([files Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=0&materialId=slides&confId=1331) pdf file  )  | Christian Kiesling (tbc) |

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| 10:20 | News on thermal measurements (20') ([files Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=1&materialId=slides&confId=1331) pdf file  )  | Arantza Oyanguren |

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| 10:40 | Switcher Probestation Tests (20') ([files Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=3&materialId=slides&confId=1331) pdf file  )  | Lukas Raffelt |

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| 11:00 | AOB (20')  |  |
|  | * Integration Matrix (15') ([files Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?subContId=0&contribId=2&materialId=slides&confId=1331) ppt file  )
 | Hans-Günther Moser |

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(http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=1331)

1. **News from B2GM (H.-G. Moser for C. Kiesling)**

The B2GM was held in Nagoya form July 6-9. We were interested to hear whether the earthquake had any impact on the superKEKB schedule. The answer is ‘no’ the machine will be on time. However, due to funding reasons Belle II will be about one year late. In addition the commissioning/installation schedule was changed:

Machine commissioned without QCS: October 2014

Machine running with beast II (without QCS): till May 2015

Belle II roll in: July 2015

OCS ready: August 2015

Run (without PXD/SVD): till December 2015

Integration of PXD/SVD: January 2016

This means that the PXD needs to be delivered to KEK in August 2015 (for the integration with beam pipe and SVD). The original date was May 2014, so there is a ~1 ½ year delay.

Given the issues with yield, the integration of additional features in the DEPFET process (thin oxides..) and the request for a system test we proposed to use this time for a prototype run. This has been endorsed by the EB.

Other news are:

* DESY is now member of the DEPFET collaboration
* One BG2M per year will be outside KEK. Proposal for 2012: Bad Aibling (Bavaria).
* Ushiroda-san wants to have regular meetings of technical contacts. He proposes a matrix with sub-detector contacts for various subtasks (see at AOB).

Please see Christian’s slides for more details (especially concerning PXD R&D) or Hans-Günther’s from the B2GM plenary

Laci Andricek added news on the SOI: Icemos has delivered bonded wafers with structured implant (implanted at the HLL). Basically ok, though polishing has to be done at Rockwood.

Testwafers have been sent to Shin-Etsu

Christian contacted a SOITEC CEO. SOITEC cannot make the wafers anymore, but they will contact LETI and see if something can be done there.

1. **Cooling Studies (A. Oyanguren)**

The cooling mock up in Valencia has been completed with a dummy module equipped with heaters to simulate the power dissipation of DEPFET and ASIC. Cooling studies (including air cooling) have started. The air cooling seems to work nicely, the module temperate and its gradient along the module are reduced. Still the setup is preliminary and power dissipation is lower than expected, but this will be corrected.

Carbon tubes for guiding the air directly on switcher have arrived and will be tested. A position sensor will be added to study vibrations.

1. **Switcher test with a probe station (L. Raffelt)**

Bare switcher chips can now be measured befor bumping using a special needle card. Two sets of switcher chips were tested. On set of 12 chips (bare), all of the working. From 13 chips with gold studs, 11 worked. Hence the large fraction of broken chips seen on hybrids is unlikely to be due to the switcher itself.

A new probe card has been ordered which will allow testing of the new switcher, bare, with studs and after flip chip.

1. **AOB**

* Rainer reported on the status of PXD6 yield tests. Unfortunately a large fraction of pixels are not working, they have no contact to the drain. The reason is understood now, a developing step needed after thinning damaged the Al contacts. It may be possible to repair the wafers which have not yet been cut and process the remaining two wafers without damaging them.
* Matrix with subdetector contacts: Hans-Günther showed a draft version of the matrix with PXD contact persons for various subdetector tasks. Most are known and people have agreed. Some still need confirmation (reconstruction, data quality).
* Next meeting: September 7/14 (Wednesday) 10:00

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