**Minutes, 74th PXD EVO Meeting, Oktober, 2014, 10:00**

Present: H.-G. Moser, C. Kiesling, D. Klose, J. Ninkovic, C. Kreidl, E. Prinker, C. Marinas, D. Levit, L. Andricek, C. Niebuhr, C. Koffmane, F. Müller, H. Krüger, M. Ritzert, P. Leitl, A. Campbell, M. Valentan, B. Kisielev, S. Tanaka, I. Peric, I. Kishishita, L. LiGoi

* Tuesday, 21 October 2014
  + 10:00 - 10:20EMCM4 tests *20'*

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| Sprecher: | Paola Avella |
| Material: | [**Slides**](https://indico.mpp.mpg.de/materialDisplay.py?contribId=5&materialId=slides&confId=3144)[pdf file](https://indico.mpp.mpg.de/getFile.py/access?contribId=5&resId=0&materialId=slides&confId=3144) |

* + 10:20 - 10:40Summary: Meeting at NTC *20'*

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| Sprecher: | Laci Andricek |
| Material: | [**Slides**](https://indico.mpp.mpg.de/materialDisplay.py?contribId=0&materialId=slides&confId=3144)[pdf file](https://indico.mpp.mpg.de/getFile.py/access?contribId=0&resId=0&materialId=slides&confId=3144) |

* + 10:40 - 11:00Summary: Meeting on CO2 Cooling *20'*

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| Sprecher: | Christian Kiesling |
| Material: | [**Slides**](https://indico.mpp.mpg.de/materialDisplay.py?contribId=1&materialId=slides&confId=3144)[pdf file](https://indico.mpp.mpg.de/getFile.py/access?contribId=1&resId=0&materialId=slides&confId=3144) |

* + 11:00 - 11:20Pilot Run Status *20'*

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| Sprecher: | Christian Koffmane |
| Material: | [**Slides**](https://indico.mpp.mpg.de/materialDisplay.py?contribId=6&materialId=slides&confId=3144)pdf filedown arrow |

* + 11:20 - 11:40ASIC review *20'*

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| Sprecher: | Hans-Günther Moser |
| Material: | [**Slides**](https://indico.mpp.mpg.de/materialDisplay.py?contribId=2&materialId=slides&confId=3144)[powerpoint file](https://indico.mpp.mpg.de/getFile.py/access?contribId=2&resId=0&materialId=slides&confId=3144) |

* + 11:40 - 12:00B2GM *20'*

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* + 12:00 - 12:20AOB *20'*

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**EMCM4 Tests (P. Avella)**

Paola presented results of wafer level tests of 5 EMCM4 wafers (after copper, measuremtns with ATG). Each wafers has 7 DUTs (EMCM w/o diff. lines, PXD9-like), altogether 35 DUTs were measured for shorts and openings. 29 DUTs were flawless (class 0), 3 had lethal shorts (class 4, like shorting a power line) and 2 had shorts which would affect one column (class 2). One high ohmic short was found, which, however, does not affect the functioning of the module. Defining classes 0,1,2 as ok, the yield is 91.4% which is very good. There was some discussion to whether class 2 should really be counted as ok (depending of the kind of defect, the defect may have an impact on the whole module nevertheless). However, since these are lateral shorts in one Alu-layer, they can be repaired. It is concluded that, based on these tests, the metal processing of PXD9 can proceed.

**Meeting at NTC (L. Andricek)**

Last Friday (October 17) some of us (L. Andricek, C. Kiesling, H.-G. Moser, C. Marinas, C. Lacasta, M. Vos) visited NTC in Valencia to discuss the status of SMD mounting. We had a lab tour and some discussions. We judged the SMD procedure to be ‘in principle’ ok. Some tests need to be repeated with the final tooling and solder (PbSn instead of SAC). Open issues are:

* Detailed process definition (incl. cleaning and inspection)
* Handling of thinned modules
* Handling jigs
* Reliability tests and QA

Laci defined a 3-phase work plan to finalize the procedure till February 2015. The plan includes to production of 3 fully functioning EMCM modules. Progress will be monitored in bi-weekly phone meetings.

(A request by NTC to check the pad position at one location (caps 0201) needs to be followed up).

**Status IBBelle (C. Kiesling)**

Christian reported on a meeting with representatives of KEK, CERN, NIKHEF, DESY and MPP on IBBelle. Main items discussed were:

* Status of documentation
* TÜV certification
* Operation at KEK
* Services (Power, water) needed
* Location (container)

The documentation is now in a stage that the ordering of the pars can start. Parts for ~ 110 k€ have already been ordered.

The location in a container in a hut outside Tsukuba hall is now the preferred solution.

Delivery of IBBelle to KEK is scheduled for Summer 2016.

**Status of Pilot Run (Christian Koffmane)**

The pilot run (3 hot wafers and 5 dummies) is ready to be processed. Before processing can start we need to validate the recent layout changes by Christian Kreidl. Layout tests with LVS and DRC were successful. The information on the changes has been circulated to the people involved and the decision to go ahead should be made next Friday in the DEPFET Lab Meeting. So far there is one issue concerning the move of some bond pads to the edge which may reduce the yield of the Kapton. However, this is a pad needed for switcher monitoring, which is now obsolete (Confirmed by Ivan).

**ASIC Review (H.-G. Moser)**

The review will be October 27 and 28 at MPP. Reviewers are: Gary Varner (Hawaii), Wladislaw Dabrowski (Krakow) and Valerio Re (Bergamo, Pavia). The agenda was finalized and speakers were nominated:

1. Introduction: H-G. Moser
2. PXD Overview: L. Andricek
3. Switcher Design: I. Peric
4. Switcher Tests & Plans: C. Kreidl
5. DCD Design: I. Peric
6. DCD Performance Tests: C. Koffmane (for E. Prinker)
7. CDC Plans and QA: I. Peric
8. DHPT design: T. Hemperek
9. DHPT Performance Tests: I. Kishishita
10. DHPT Plans & QA: C. Marinas
11. EMCM tests: F. Müller
12. Gated Mode: C. Koffmane

**B2GM**

The PXD session will be on Wednesday, November 5, 8:30-12:30 in 3-go-kan (Date was change to allow participation of late arrivals). Following presentations are proposed:

1. Introduction: C. Kiesling
2. EMCM4 tests and pilot run: J. Ninkovic
3. EMCM electrical tests: F. Müller
4. Beam Test and large PXD6: C. Marinas
5. Module assembly preparations: L. Andricek
6. Services: S. Rummel
7. Thermal Tests & IBBelle: C. Niebuhr
8. DHH, optical links: D. Levit
9. Slow Control in Mainz: C. Sfienti
10. ASIC review: G. Varner
11. Plans & Schedule: H-G Moser