**Belle II PXD EVO Meeting**

20.7 /2010

Present: L. Andricek, S. Lange, Karlsruhe, C. Oswald, J. Knopf, C. Marinas, H. Palka, A. Wassatsch, I. Kochito, L. Andricek, S. Tanaka, B. Kisielewski, J. Knopf, J. Schieck, A. Ritter, F. Simon, J. Ninkovic, H. Krüger, J. Furletova, S. Furletova, ...

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| **Tuesday 20 July 2010** | [top[top](http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=876#top)](http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=876#top) |

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| |  |  |  | | --- | --- | --- | | 10:00 | News from B2GM (20') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=2&materialId=slides&confId=876) Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=2&materialId=slides&confId=876) [ppt file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=2&resId=0&materialId=slides&confId=876)  ) | Hans-Günther Moser | |

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| |  |  |  | | --- | --- | --- | | 10:20 | Signal Integrity (15') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=0&materialId=slides&confId=876) Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=0&materialId=slides&confId=876) [pdf file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=0&resId=0&materialId=slides&confId=876)  ) | Hans Krüger | |

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| |  |  |  | | --- | --- | --- | | 10:35 | Current Sinks (10') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=5&materialId=slides&confId=876) Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=5&materialId=slides&confId=876) [pdf file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=5&resId=0&materialId=slides&confId=876)  ) | Bartlomiej Kisielewski | |

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| |  |  |  | | --- | --- | --- | | 10:45 | Excel Action List (20') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=1&materialId=slides&confId=876) Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=1&materialId=slides&confId=876) [ppt file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=1&resId=0&materialId=slides&confId=876)  ) | Hans-Günther Moser | |

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| |  |  |  | | --- | --- | --- | | 11:05 | weekly status report (15') ([[files](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=3&materialId=slides&confId=876) Slides](http://indico.mppmu.mpg.de/indico/materialDisplay.py?contribId=3&materialId=slides&confId=876) [ppt file](http://indico.mppmu.mpg.de/indico/getFile.py/access?contribId=3&resId=0&materialId=slides&confId=876)  ) | Hans-Günther Moser | |

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(http://indico.mppmu.mpg.de/indico/conferenceDisplay.py?confId=876)

1. **News from the B2GM**

Yamautchi-san announced that the Ministry has approved ~100 M$ over the next three years for the construction of sKEKB from a special fund ‘Very Advanced Research Program’. De facto this implies the approval of the project.

(Of course further 250M$ are needed and expected to be funded).

Consequently KEKB was shut down June 30 and construction work for LER and the new damping ring will start. Belle will be rolled out in autumn. A inauguration celebration is foreseen this fall.

1. **Signal Integrity**

Hans Krüger reported on the status of the kapton flex, patch panel and signal transmission to the DHH. Since the DHH has to be outside Belle II the signals have to be transmitted over 12m. Hans does not recommend the use of active repeaters. The most problematic part is the kapton flex which damps the HF signals and should therefore be as short as possible. The twisted pair cables have good transmission properties, and long lines should be possible.

Another problem is the size of the patch pane which is limited by its location inside the QCS shield. Hans suggested stitching of kapton flexes to overcome the maximal length of 40cm. Then the patch panel could be placed further away, outside the QCS shield. However, besides the problem of damping and the complicated stitching process, there are doubts whether sufficient space will be available there (clash with SVD services).

The size of the patch panel is given by the size of the connectors, especially the ones for the HF signals. For the power supplies Stefan Rummel found some small connectors. For HF the proposal is RJ45 connectors (3 are needed), which is rather bulky.

Hans proposed the solder the cables on PCB and use high density connectors on the PCB instead (two possible solutions) which should lead to a more compact design.

Status: Test flexes have been designed and ordered. A second supplier has been contacted.

DHH test hybrids are in production and expected next week. The FPGAs are programmed. Bonn is waiting for the wire bond adaptor, which is produced at the HLL and should be ready next week.

Shuji-san asked for a ‘worst case’ design of the patch panel.

Since the beam pipe mock-up is in Munich it was agreed that Stefan Rummel (and Hans Krüger when he has time) should look at it and estimate how much space is available. Results are expected by October. We should communicate with Immanuel Gfall and Markus Friedl about interference with the SVD.

1. **Current Sinks**

Bartlomiej showed results of a test using two VR4931 voltage regulator to regulate a current sink like AMPLOW. The circuit worked. Disadvantage of such a setup is the need of an extra power supply, increasing the number of supplies for the complete PXD to 160.

1. **Excel Action List**

The old action list was a simple word file which became too long to be manageable. For users it became difficult to extract the actions they were directly concerned.

The list is now organized as Excel spreadsheet allowing the use of excel functions to search and filter actions. Each action can be tagged according to categories, work-packages, persons etc. WWW access is possible (view and edit ) with Google Docs. Users should create a Google Docs account and ask Hans-Günther to include them in the ‘share’-list .

1. **Weekly Status Report**

Ushiroda-san asked the sub-detector coordinators for a weekly status report.

Each Friday a template should be filled (with Google Docs). Hans-Günther will do this for the PXD. However, he asks the work-package leaders to provide him with the necessary information (by E-mail, latest on Thursday evening) .

This should only be short statements like ‘xyz chip back from fab / under test / tested, results to be reported next meeting’.

1. **AOB**

**Switcher:** The hybrid for the DCD and switcher S has some bugs in the switcher S part. It was asked whether we should go immediately to the switcher B.

It seems that the hybrid can be fixed, so that it allows tests of the DCD with PXD5 matrices. So it was agreed that they will be sent to Munich, repaired, equipped with a PXD5 matrix and send back. New hybrids for switcher B and PXD6 matrices will be prepared.

The wafers with the thin oxide test structures are ready (Jelena)

Next meeting: August 3, 2010, 10:00