Charge of the Workshop

- Operation
  - Thanks to the tremendous efforts of people at KEK and in the home labs we are very successfully taking physics data
  - Machine colleagues are pushing SuperKEKB performance ⇒ continuous injection, higher beam currents
    - ▸ Next steps in β^*_y only after summer break → have to be prepared for new surprises/challenges
  - Open issues and concerns for PXD
    - ▸ Occupancy drops during background bursts (Are we facing fundamental limitations here?)
    - ▸ Gated mode operation (Before summer we must know how well this works or where we have to improve)
    - ▸ Do we understand the background well enough to confidently extrapolate to final conditions (… and beyond)
      - When will we hit our limits in terms of occupancy and accumulated dose?
    - ▸ Do we understand and monitor the PXD data quality well and fast enough?
- PXD2020
  - A lot of work went into improving the ladder assembly procedure. What will be the final yield?
  - How can we recover from the recent switcher *SER_out* problem and what is the impact on the schedule?
  - At the next TB meeting (June 5) we have to report on the production status
    - ▸ Schedule is very tight and it will require major efforts to be ready for installation in the summer shutdown 2020
    - ▸ Can we convince ourselves and the collaboration that we have a realistic chance to make it?
  - Will we be able to install the VXD with two times more PXD cables in place?
- Upgrade
  - Although prospects for realization are still very uncertain the discussions on a potential future upgrade of the Belle II vertex detector are gaining momentum
    - ▸ Belle II VXD Open Workshop, 8-10 July at CERN: https://indico.cern.ch/event/810687/
  - What could be possible contributions from DEPFET community?

Agenda

Monday, 27 May 2019

Time	Session
09:00	Welcome/Charge of the Workshop - Carsten Niebuhr (DESY)
09:15	**Phase2/Phase3 Background and Data** - Maiko Takahashi (DESY) (until 10:35)
09:15	Experiences from VXD Alignment - Jakub Kandra (Charles University in Prague)
09:35	Offline Calibration - Qingyuan LIU (DESY)
09:50	PXD Efficiency and d0 - Cyrille Praz (DESY)
10:35	--- Coffee/Tea ---
11:00	**Phase3 Operation and summer shutdown plans** - Felix Mueller (Max Planck Institute for Physics) Björn Spruck (Uni Mainz) Hua Ye (DESY) (until 12:30)
11:00	SuperKEKB and PXD Status - Björn Spruck (Uni Mainz) Felix Mueller (Max Planck Institute for Physics)
11:35	LocalDAQ at KEK - Floriam Lütticke (Uni Bonn)
11:50	IBBelle Status - Sven Vogt (Max-Planck Institut for Physics)
12:10	IBBelle Chiller Update - Ulrich Leis (Max-Planck-Institut für Physik)
12:30	--- Lunch ---
14:00	**Irradiation and Beam Tests** - Botho Paschen (University of Bonn) (until 15:30)
14:00	Phase 2 dose and PXD9 X-ray irradiation - Harrison Schreeck (University of Göttingen)
14:20	PXD9 resolution at beam tests - Botho Paschen (University of Bonn)
14:40	PXD9 efficiency at beam tests - Philipp Wieduwilt (Universität Göttingen)
15:30	--- Coffee/Tea ---
16:00	**IB** - Jochen Dingfelder (University of Bonn) (until 18:00)

Tuesday, 28 May 2019

Time	Session
09:00	**Edet session** (until 12:30) (Seminarraum)
09:00	Intro / overview Edet80K - Johannes Treis (MPG Semiconductor Laboratory)
09:30	Hardware development status - Christian Koffmane (MPI Halbleiterlabor)
09:50	Firmware development status: - Mikhail Polovykh
10:10	Software development status - Andrey Vostrukhin
10:30	Results from prototype - Eduard Prinker (Max-Planck-Institute)
10:50	Irradiation status & plans - Mitja Predikaka (HLL MPG)
11:10	"Plan B" upgrade concept - Mikhail Polovykh (HLL der MPG)
11:30	Parts.fused development - Andrey Vostrukhin
11:50	TBD
12:10	Discussion
09:00	**Lab Framework and DESY Testsystem (gated mode)** - Felix Johannes Müller (DESY Hamburg) Philipp Leitl (Max Planck for Physics) (until 10:30)
09:00	Gated Mode Operation - Felix Müller (Max Planck for Physics)
09:20	Offset Calibration - Philipp Leitl (Max Planck for Physics)
09:40	Automatic Pedestal Optimisation (pre offset calibration) - Markus Reif (Max Planck for Physics)
09:50	Automatic Pedestal Optimisation (post offset calibration) - Varghese Babu (DESY)
10:30	--- Coffee/Tea ---
11:00	**DAQ: DHH and Onsen** - Igor Konorov (Technical University Munich) Simon Reiter (Uni Giessen) (until 12:30)
11:00	DHH System and DHE firmware - Igor Konorov (Technical University Munich)
11:20	DHC firmware - Stefan Huber (TUM)
11:40	ONSEN - Simon Reiter (Giessen University)
12:00	DATCON - Bruno Deschamps (University of Bonn)
12:30	--- Lunch ---
14:00	**PXD2020: Sensors/Modules/Ladders** - Laci Andricek (MPG Halbleiterlabor) (until 15:55)
14:00	PXD2020 Overview and Module Situation - Laci Andricek (MPG Halbleiterlabor)
14:20	Ladder Assembly for PXD2020 - Hans-Günther Moser (Max Planck for Physics)
14:40	PXD9-20: results from probe station measurements - Daniel Klose (MPG - HLL) — Slides
15:00	DCD/SWB for DEPFET PXD upgrade and HV-CMOS option for VXD upgrade - Ivan Peric (KIT)
15:30	--- Coffee/Tea ---
16:00	**Non-Belle Applications** - Jelena Ninkovic (MPG Halbleiterlabor) (until 18:00)
16:00	80k Edet project - Christian Koffmane (MPI Halbleiterlabor)
16:30	Athena WFI - Peter Lechner
17:00	QPIX and SuperGq DEPFETs - Alexander Baehr
17:30	DANAE - Johannes Treis
19:00	--- Conference Dinner ---

Wednesday, 29 May 2019

Time	Session
09:00	**PXD2020: preps for Installation** - Carsten Niebuhr (DESY) (until 09:50)
09:00	Introduction - Carsten Niebuhr (DESY)
09:10	VXD De-and Reinstallation - David Kittlinger (Max Planck for Physics)
09:30	Open issues and discussion
09:45	**Phase3 Background** - Maiko Takahashi (DESY) (until 10:30)
09:45	PXD Performance & Injection Background - Björn Spruck (Uni Mainz)
10:00	Beam Background - Slavomira Stefkova (DESY)
10:30	--- Coffee/Tea ---
11:00	**VXD upgrade** - Carlos Marinas (University of Bonn) (until 12:30)
11:00	PXD Upgrade with DEPFETs - Laci Andricek (MPG Halbleiterlabor)
11:30	VXD Upgrade using DMAPS - Jochen Dingfelder (University of Bonn)
12:00	PXD Upgrade using HV-CMOS - Ivan Peric (KIT)
12:30	--- Lunch ---