PXD IB Meeting

PXD Workshop and 24th International Workshop on DEPFET Detectors and Applications

May 16 – 18, 2022

PXD IB Meeting

Agenda:

1. Project Leader report

2. PXD2 preparation & commissioning

   ➤ Fibers, IBBelle, Personpower

   ➤ Personpower and expertise for the running of PXD2

3. Risk assessment and spares

4. PXD shifts

5. PXD authorship – B2MMS flag

6. Belle II Authorship qualification

7. AOB (VTX upgrade status, …)

4. PXD Shifts2022b

Institute	Shift Quota 2022b	Shifts signed up 2022b	Percentage done
Bonn	44,75	38,75	86,59%
DESY	74,41	75,07	100,89%
Gießen	22,32	21,03	94,22%
Göttingen	22,32	19,14	85,75%
LMU	14,88	14,67	98,59%
Mainz	29,76	35,16	118,15%
MPP	59,53	39,58	66,49%
Prague	44,65	46,61	104,39%
Tabuk	14,88	0,00	0,00%
TUM	52,09	9,24	17,74%
Total	379,59	299,25	78,84%

Booking status 2022b

…..your last chance of shifting for a long time….

PXD Shift Points

On average 4 shift points per day (3 expert + 1 on call)

	MO	DI	MI	DO	FR	SA	SO
OWL	1,15	0,77	0,77	0,77	0,77	1,15	1,15
DAY1	0,77	0,46	0,46	0,46	0,46	0,77	0,77
DAY2	0,77	0,46	0,46	0,46	0,46	0,77	0,77
SWING	0,77	0,77	0,77	0,77	0,77	1,15	1,15

DAY and week-end shifts („premium shifts")   ~70% of points
=> institutes should book accordingly (also about 70% of points in premium shifts)

5. PXD authorship rules

- **PIs propose** authorship for **new member(s)** of their groups

  → **IB decides** at IB meeting (as regular part of the agenda)

- **Min. period of PXD membership before** becoming PXD author: none

- **Period of authorship after** PXD member leaves collaboration: 1 year

- **Author (and acknowledgement) list** should be **updated regularly, e.g. for every IB meeting**.

  Reminder to update author list will be sent out by IB chair.
  IB chair then updates the latex files for publications accordingly.

- For the large PXD paper, special rules apply: everybody should be in (PIs can decide for their group members)
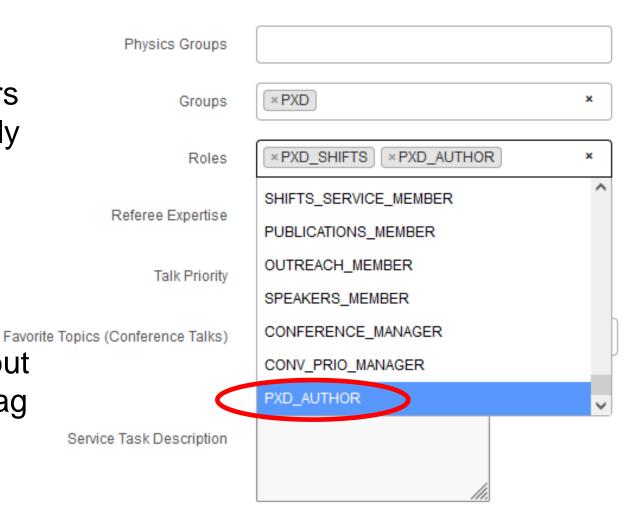
from Jochen

5. PXD authorship – new B2MMS flag

New role   „PXD_AUTHOR" in B2MMS.

Please go through your institute's members and set the PXD_AUTHOR flag accordingly !!

We will then update the author list and provide a new latex template.

Last update was done in February 2022, but not all institutes had the PXD_AUTHOR flag set.
Still only 4-5 institutes with set flag!

6. Belle II Authorship qualification

Authorship Qualification Tasks

Qualification Task Details	HV-Scan (also in Calibration IOC) Mainz Test-beam measurements Simulation of fast shut downs of PXD Moduls (not finished) 2 irradiation measurements in Bonn Collaborating onTID project of Yannik and Benjamin Re-installation of the Testing setups in Göttingen and re-qualification
Planned Qualification Tasks	PXD_SERVICE
Accomplished Qualification Tasks	PXD_SERVICE_DONE

↑
has to be signed off by Carsten

https://confluence.desy.de/display/BI/PXD+Qualification+Tasks

PXD Qualification Tasks

Bjoern Spruck posted on 21. Mar. 2022 14:20h - last edited by Bjoern Spruck on 21. Mar. 2022 15:10h

The list of authorship qualification tasks related to PXD. This includes ideas for tasks which have not yet completely defined.

Topic	Detailed description, milestones	Person	Contact / Supervised by	Start date	End date	person month (estimate)	priority	signed off
ROI size investigations	• ROI sizes were defined in monte carlo studies and need to be checked against actual data performance • they depend on alignment and calibration, which may be worse on-line • the study need to compare ROI efficiencies with offline and online calibration alignment in various varaibles (module, layer, phi, theta, pT dependency) • the (hard-coded) sizes calculation parameters need to be packed into an conditionsDB object, thus they can be adapted. need to keep track of changes for run dependent MC. • provide a monitoring which can alarm us if on-line calibration would impact ROI efficiency.		@ Bjoern Spruck				low	
PXD DQM	• Updates on the PXD DQM • Further support for MiraBelle in-run trend plots • Improve online efficiency calculation based on skims • Investigating effect of event sampling changes ("skims", triggers) • Investigate background monitoring with 2Hz trigger (providing that event sampling on ereco is changed) • provide better reference plots as well as improving the way they are combined. • define further alarm conditions		@ Bjoern Spruck					

PXD Unpacker check	• check old vs new unpacker for exp 7-22
	  • pixel-by pixel comparison as well as error flagging
	  • check unpacker versioning for exp 7/8, set version number database which indicate which unpacker to use
	• processing data on grid (cdst) and locally on kekcc or desy batch farm (raw data)
	• organize to get a sufficient fraction of raw data from tape (on kekcc)
	• check "special" runs with lots of unpacker errors (e.g. based on dqm plots)
	• writing code which does the checking on-the-fly on the grid, as it is impossible to store large amounts of raw data for offline-check. This code must be verified properly on kekcc before deployment.
	• provide a mechanism to simplify these checks for further changes in the unpacking (control histograms)
			@ Bjoern Spruck				low	

Injection & Bunch reconstruction for Gated Mode Monitoring & Simulation	• Proper reconstruction of injection time & bunch from TTD data (together with T0 group)
	  • Calibration (worst case, run by run): provide plugin to airflow or mechanism to reconstruct from online DQM plots
	  • Proper Monitoring (improve DQM plots, "alarms")
	• Reconstruct precise read-out gate from trigger time (optional)
	• Use the above to make a proper simulation (e.g. from overlay background)
			@ Bjoern Spruck					

simulation parameters for PXD			@ Maiko Takahashi					
PXD in/near dead/inefficient regions			@ Maiko Takahashi					

7. AOB

❖ VTX upgrade status (Carlos Marinas)

❖ ???

Homework :

• Please keep the PXD_AUTHOR flag up to date for your institute – act now!

• For your institute's deliverables: think about risk assessment and spares, we should collect lists

• Quite a few shifts for the next month still have to be filled