

Verbund 05H2018 R&D Detektoren (Tracking)

A.Schöning
Heidelberg, 2. February 2019

Welcome & Introduction

BMBF Verbund “Tracking”

Goal of Verbund (2018-2021)

- Generic detector R&D in the areas of monolithic pixel sensors → HV-MAPS
- Radiation hard pixel readout electronics for ATLAS Phase II upgrade

Partners

- Bochum
- FH Dortmund
- Heidelberg
- Karlsruhe

Guests

- CERN (CLICd)
- DESY (Test beam)
- Mainz (P2 Experiment)

News & Plans

Two tapeouts of large $2 \times 2 \text{cm}^2$ sensors in 2019 (ATLASpox3, Mupix10)

- ATLASpox (demonstrator) goes in testbeam next week
- Mupix10 (Mu3e project) submitted last week

We have funding for two engineering runs @TSI for R&D

- 1st beginning 2020: Bellepix, CLICpix, Telepix, CMOS amplifier, ... → Ivan
- 2nd end of 2020?

Plans and shopping list should be discussed at the end of today!

- dEdx
- nanosecond timing chip
- scaler in pixel for beam monitoring (new)
- ...

Ideas for new activities: SiGe BiCMOS 130nm @ IHP Frankfurt(Oder)
→ picosecond timing

Agenda

Morning

	Welcome & Introduction	<i>Prof. Andre SCHÖNING</i>
	Konferenz 2-3, Heidelberg Physics Institute	09:30 - 09:45
10:00	CLICd und HVMAPS Results	<i>Mr. Jens KRÖGER</i>
	Konferenz 2-3, Heidelberg Physics Institute	09:45 - 10:15
	P2 Experiment at MESA	<i>Dr. Niklaus BERGER</i>
	Konferenz 2-3, Heidelberg Physics Institute	10:15 - 10:45
	Coffee Break	
	Konferenz 2-3, Heidelberg Physics Institute	10:45 - 11:00
11:00	DESY Testbeam Telescope Plans	<i>Lennart HUTH</i>
	Konferenz 2-3, Heidelberg Physics Institute	11:00 - 11:30
	SiGe 130nm Bi-CMOS	<i>Mr. Benjamin WEINLÄDER</i>
	Konferenz 2-3, Heidelberg Physics Institute	11:30 - 12:00
12:00	First ATLASpix3 Results	
	Konferenz 2-3, Heidelberg Physics Institute	12:00 - 12:30
	Vollintegrierter und strahlenharter DC/DC-Wandler	<i>Jeremias KAMPKÖTTER</i>
	Konferenz 2-3, Heidelberg Physics Institute	12:30 - 13:00
13:00	Lunch	

Afternoon

	Konferenz 2-3, Heidelberg Physics Institute	13:00 - 14:00
14:00	MOPS (Monitoring of Pixel System) ASIC	<i>Alexander WALSEMANN</i>
	Konferenz 2-3, Heidelberg Physics Institute	14:00 - 14:30
	Mupix10	<i>Alena WEBER</i>
	Konferenz 2-3, Heidelberg Physics Institute	14:30 - 15:15
15:00	TCAD Simulation Studies	<i>Mrs. Annie MENESES GONZALEZ</i>
	Konferenz 2-3, Heidelberg Physics Institute	15:15 - 15:45
	Coffee Break	
	Konferenz 2-3, Heidelberg Physics Institute	15:45 - 16:00
16:00	Plans in Bochum	<i>Miriam FRITSCH</i>
	Konferenz 2-3, Heidelberg Physics Institute	16:00 - 16:20
	Plans for next TSI Submission	<i>Prof. Ivan PERIC</i>
	Konferenz 2-3, Heidelberg Physics Institute	16:20 - 17:20
17:00		

Lunch (13h00-14h00)

Lunch @
BräuStadel

