VXD Test Beam

C. Marinas[a], K. Nakamura[b]

[a]University of Bonn
[b]KEK

VXD Consortium

cmarinas@uni-bonn.de

DESY TB Schedule 2016

Date	Week		TB21		TB22		TB24/1		TB24
			DATURA	none	DURANTA	none	Telescope in PCMAG	PCMAG	none
4-Jan-16	1								
11-Jan-16	2								
18-Jan-16	3								
25-Jan-16	4				Shutdown				
1-Feb-16	5								
8-Feb-16	6								
15-Feb-16	7								
22-Feb-16	8								
29-Feb-16	9								
7-Mar-16	10		Startup		Startup		Startup		Startup
14-Mar-16	11		CMS-Pixel-Phase1		Mu3e				
21-Mar-16	12		Goettingen-CMOS		ATLAS-Pixel-AMSH35				
28-Mar-16	13		ATLAS-Pixel-MPP						
4-Apr-16	14		CMS-Pixel-Phase1				Installation		
11-Apr-16	15		PLUME				Belle-II		
18-Apr-16	16		PLUME						
25-Apr-16	17		ATLAS-Pixel-AMSH35						
2-May-16	18		CMS-Pixel-PII-KA			CALICE-AHCAL			SiPM
9-May-16	19		CMS-Pixel-PII-KA						SiPM
16-May-16	20								
23-May-16	21		ATLAS-Strip-Glue		ATLAS-ITK-Strip			LCTPC-FLC	
30-May-16	22		ATLAS-Strip-Glue		ATLAS-ITK-Strip			LCTPC-FLC	
6-Jun-16	23								CMS-Pixel-Phase1
13-Jun-16	24								
20-Jun-16	25					CALICE-AHCAL			
27-Jun-16	26								
4-Jul-16	27								
11-Jul-16	28								
18-Jul-16	29								

TB24 and TB24/1
CW 14 – CW 17

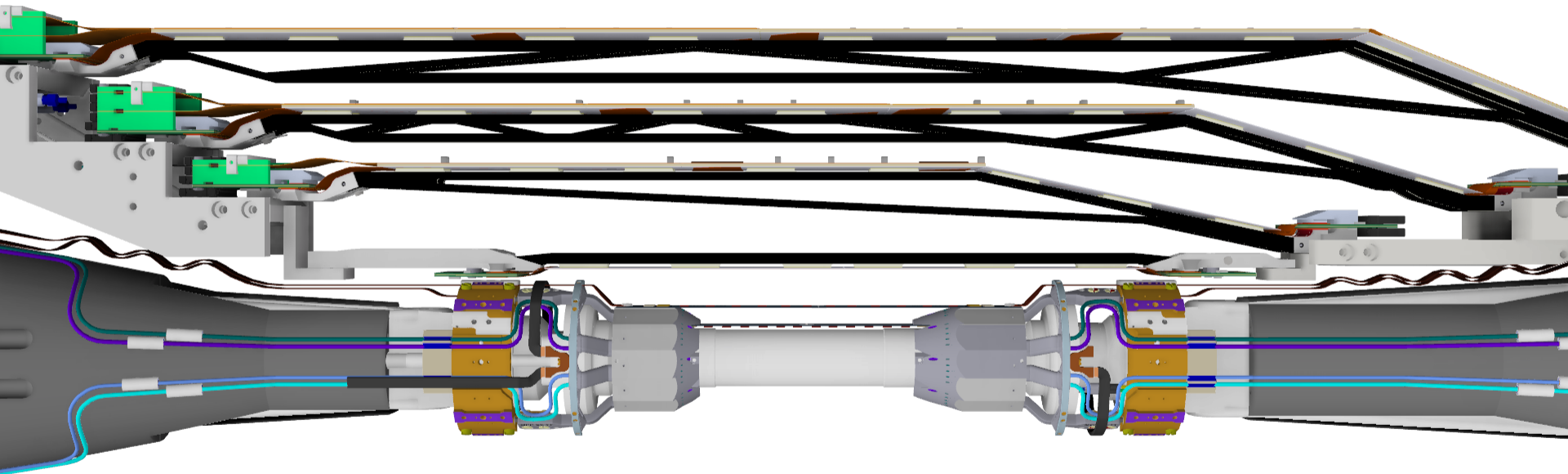cmarinas@uni-bonn.de

DESY TB

- VXD common test beam in April 2016 (4 weeks)

- Small sector of the final sensors and ASICs*
    2 PXD + 4 SVD ladders

- Complete VXD readout chain: HLT, monitoring, event building, PocketDAQ

- CO_2 cooling, slow control, environmental sensors

- Illumination with (up to) 6 GeV e$^-$ under solenoid magnetic field (PCMAG)

- Alignment, tracking algorithms, ROI

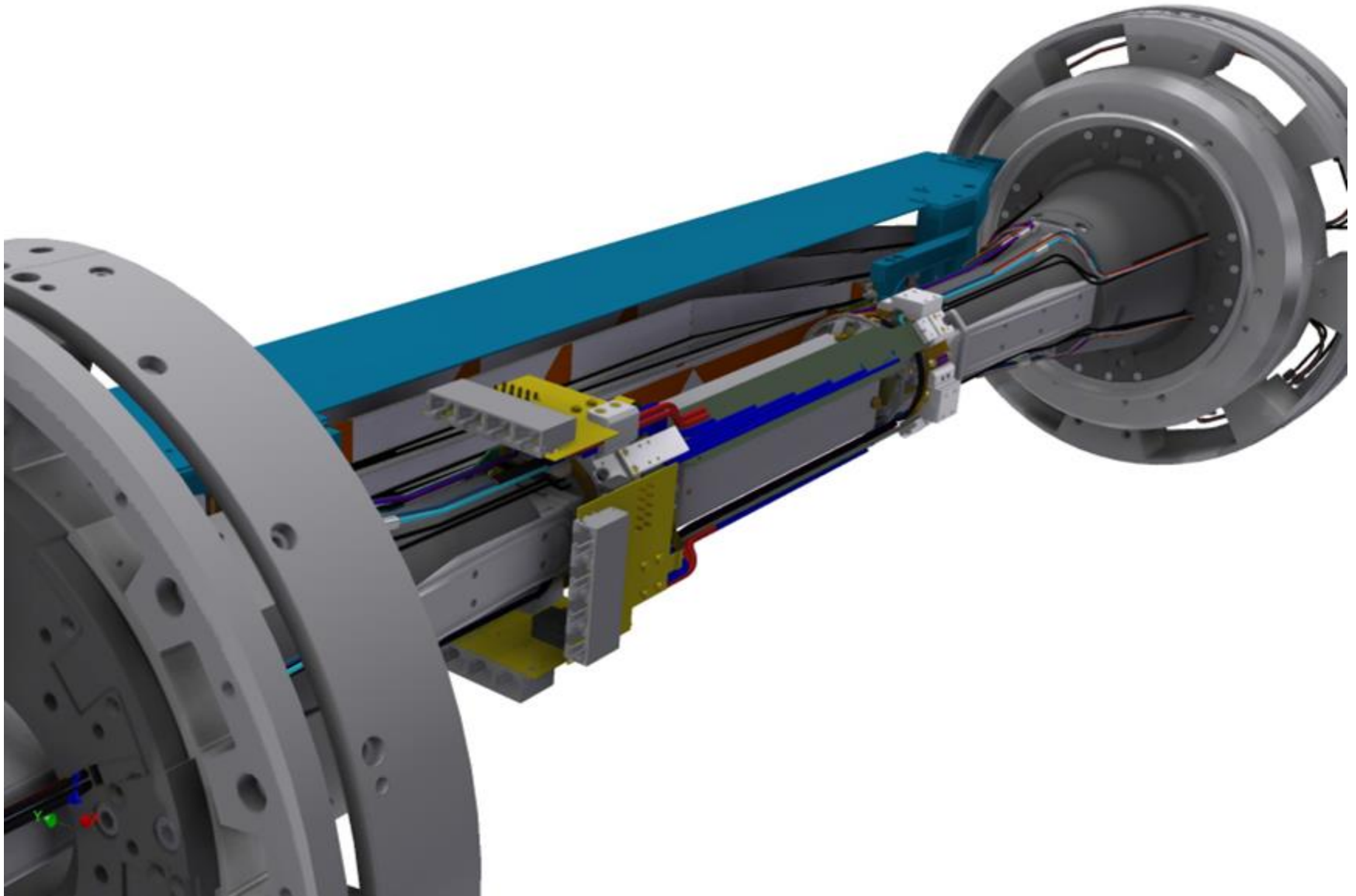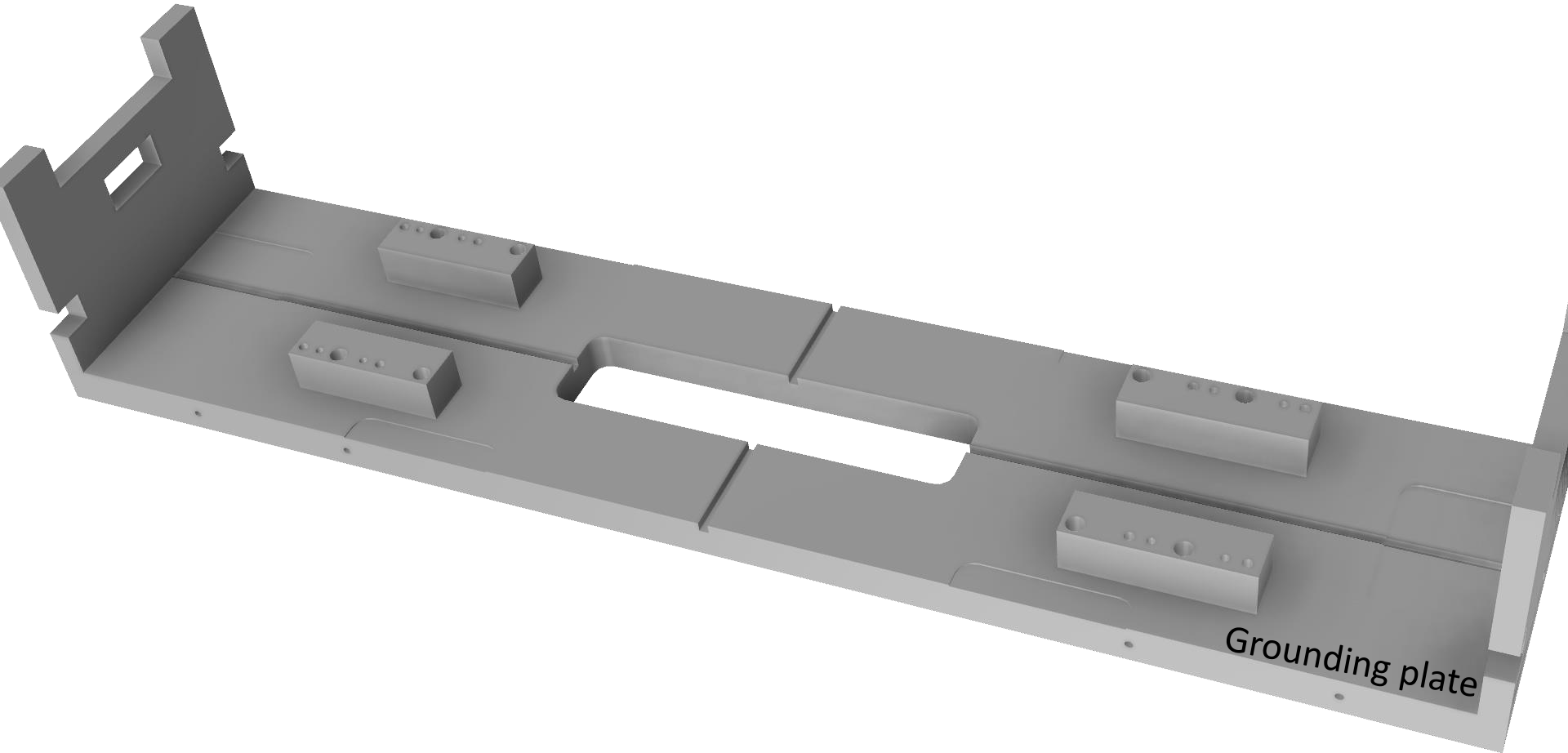■ **Goal**: **System integration and Phase 2 Commissioning**

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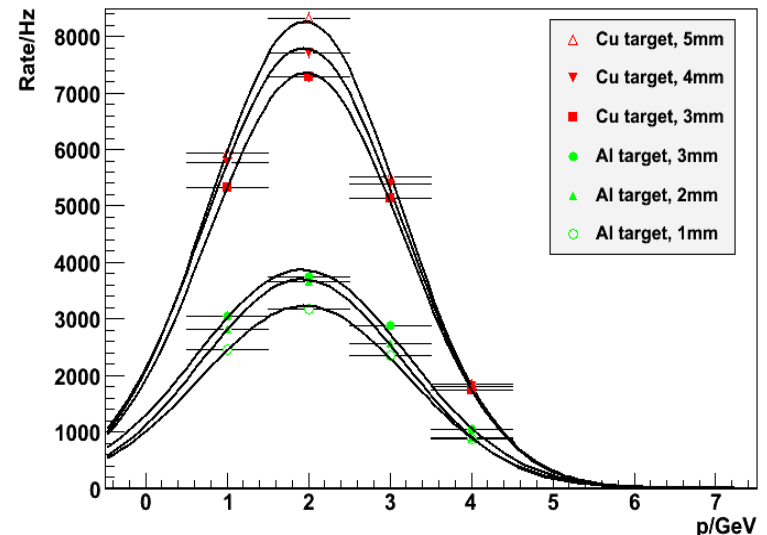
VXD Phase 2 Hardware

- Two PXD and four SVD layers
- +X direction, horizontal plane (highest background sensitivity)
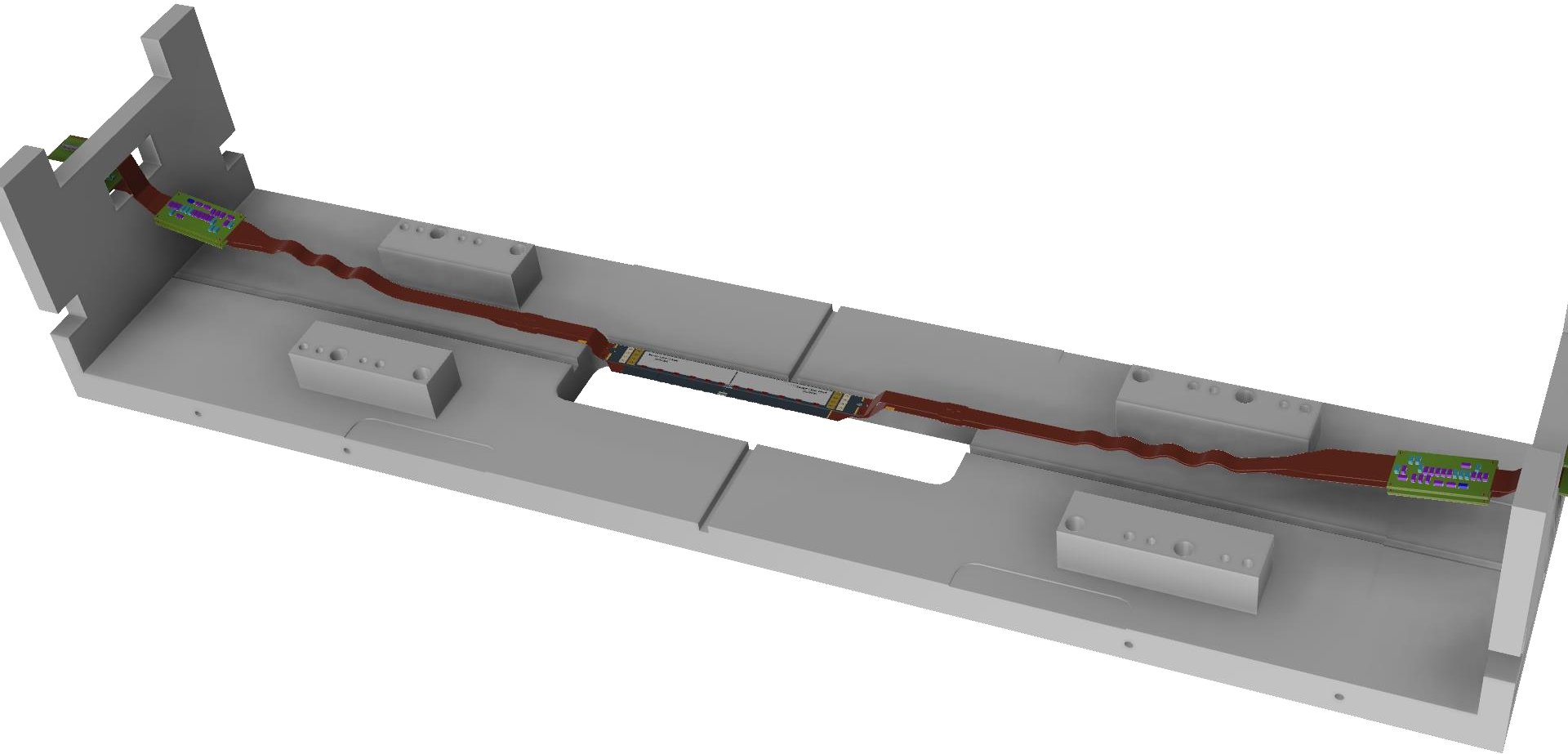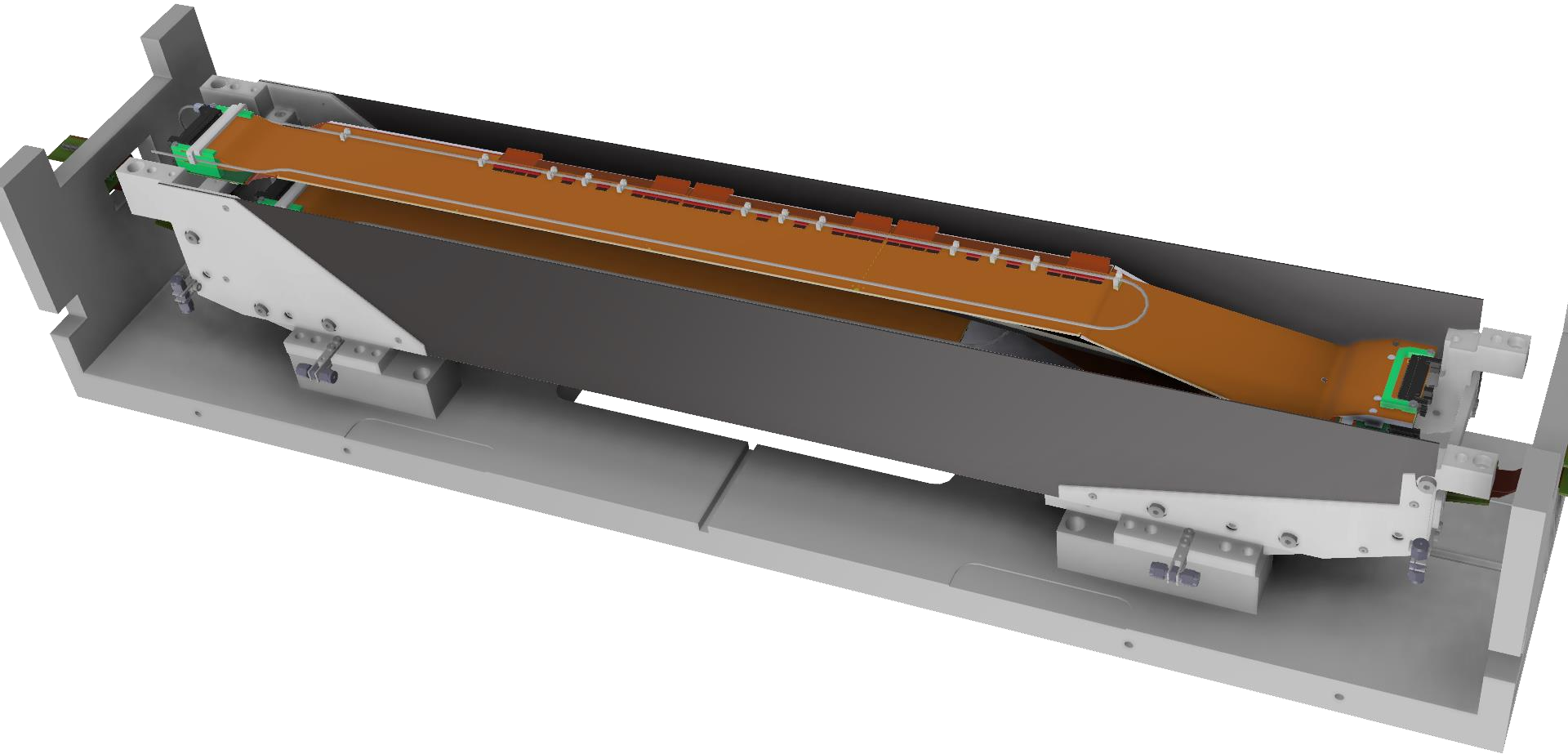

+X

VXD Detector Systems

cmarinas@uni-bonn.de

Dry Box

Grounding plate

Test Beam set up to mimic Phase 2 arrangement

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Dry Box

PXD SCB missing in this drawing

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Dry Box

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Dry Box

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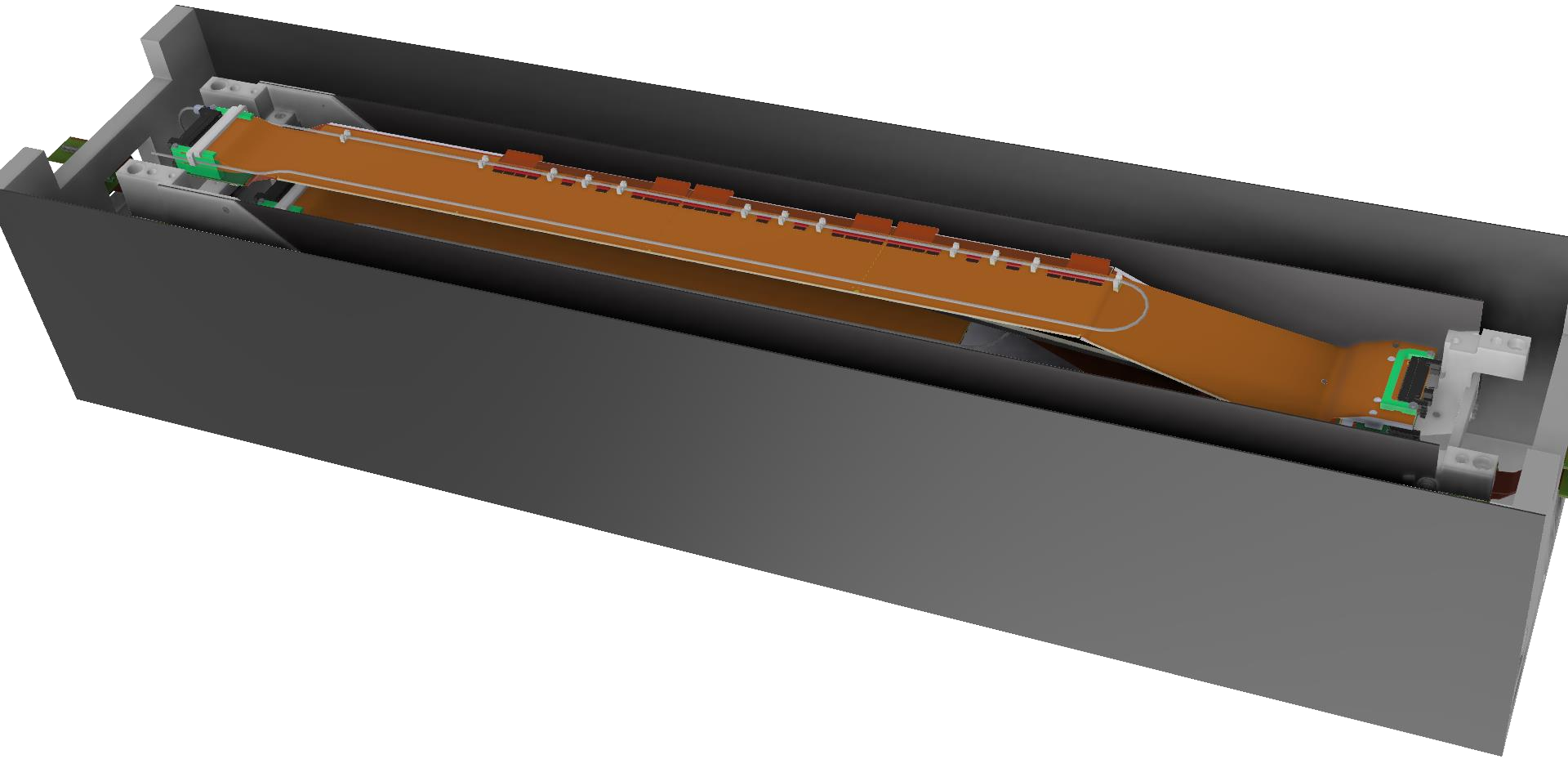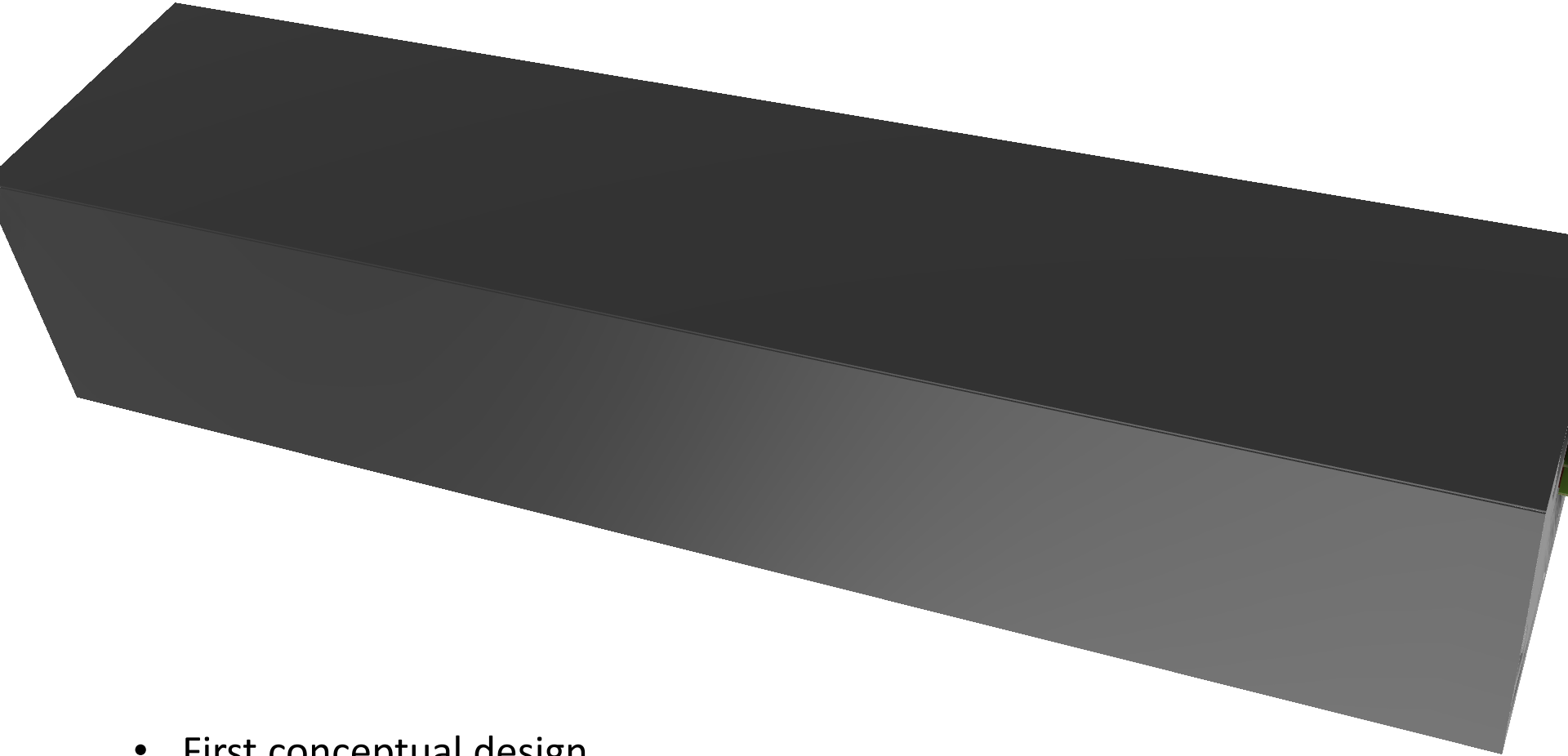
Dry Box

- First conceptual design

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Dry Box
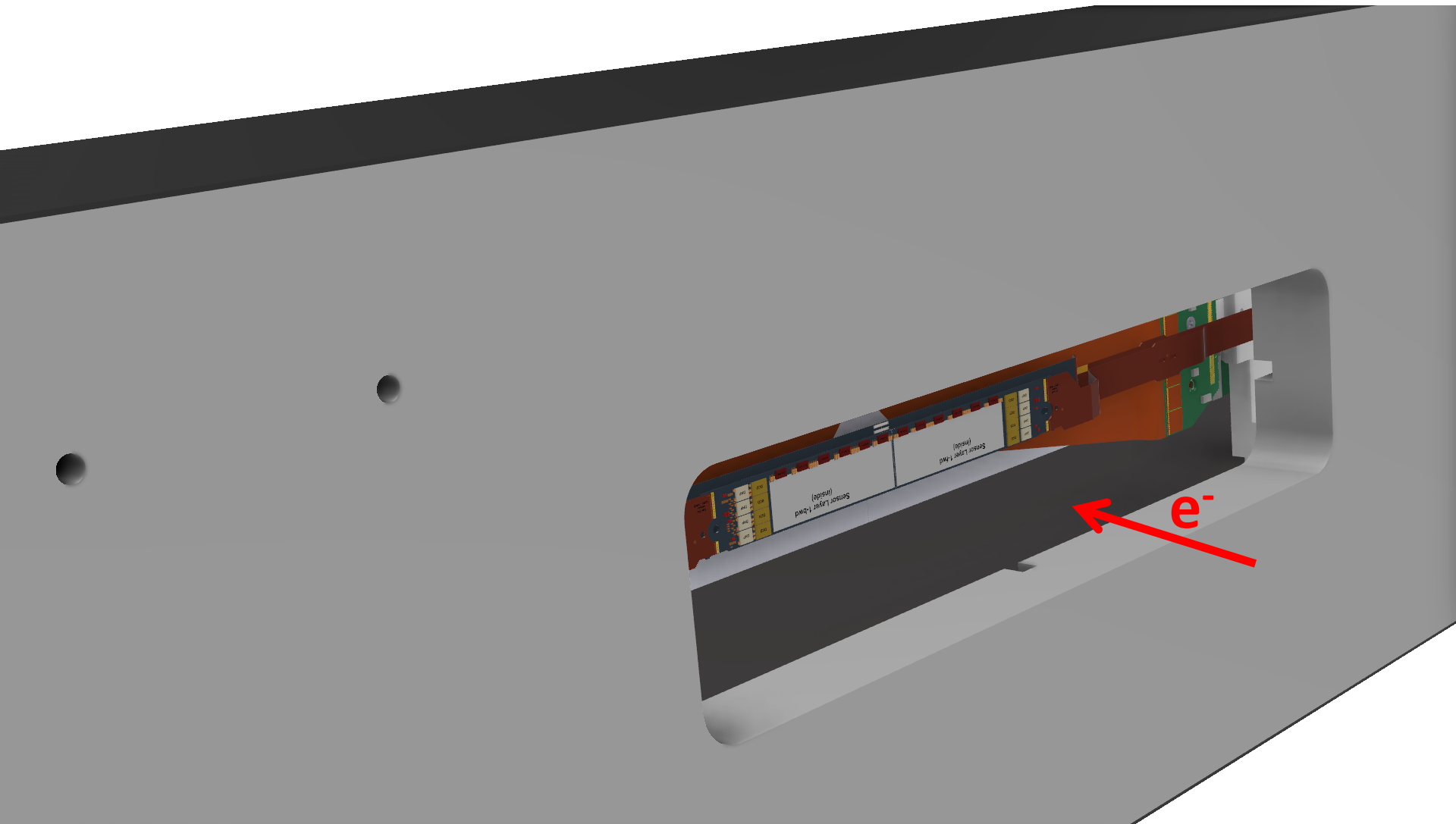
Box to be attached to the existing frame

Combined Test Beam 2014

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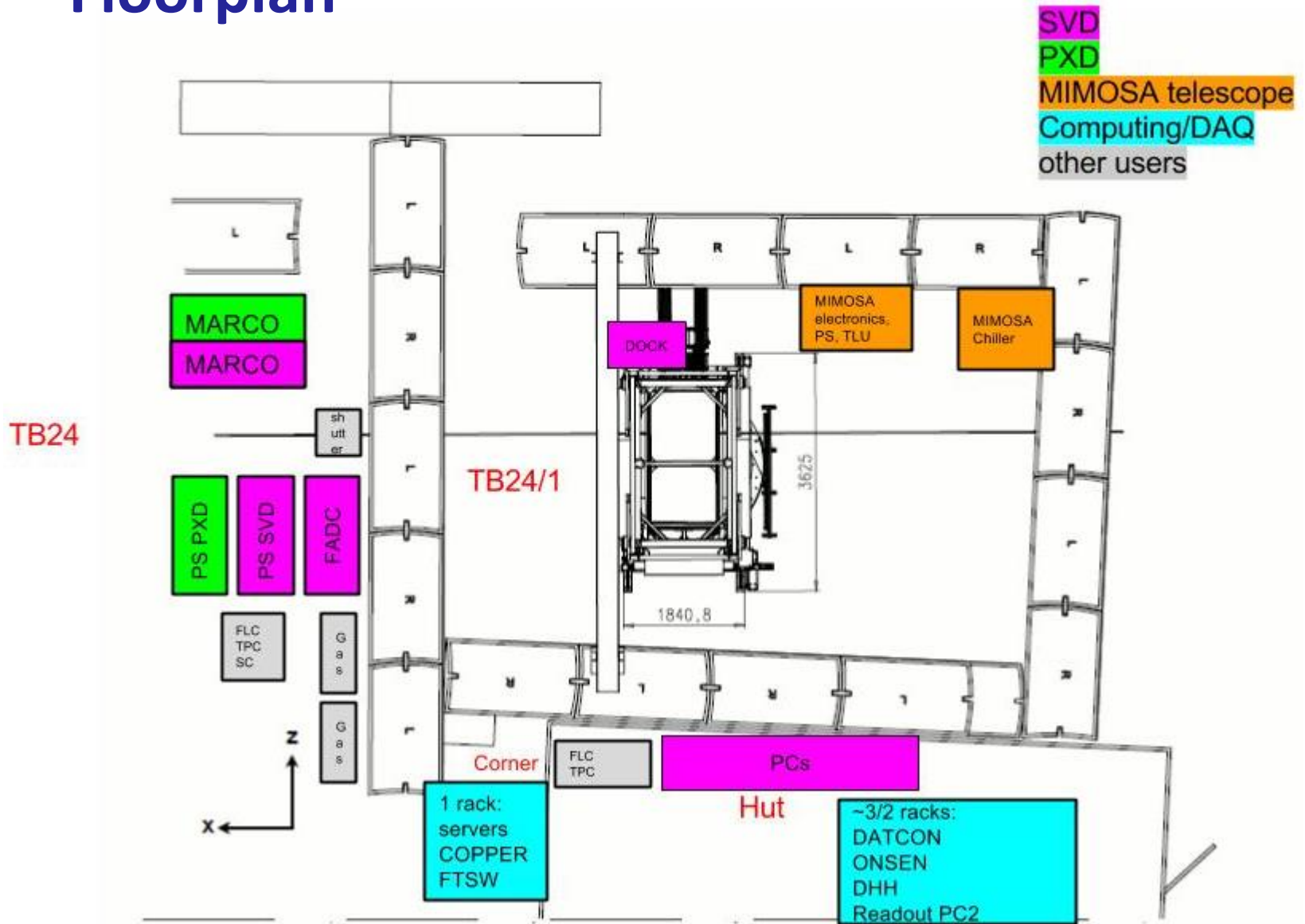
Floorplan

Default floorplan distribution as in 2014

cmarinas@uni-bonn.de

(Some) Open Issues

- Data Quality Monitoring (HitMaps, Pedestals, Noise) to be performed in ExpressReco via a BASF2 module. BonnDAQ for standalone PXD control
- Pedestal calculation: Full frames embedded in the data stream. Unpackers to be tested
- How do we do data merging at 250 MHz?

- Do we have all the equipment needed?

- Most part of the equipment should stay at DESY or be shipped again there by October 2016 → Phase 2 Commissioning tests in November

cmarinas@uni-bonn.de

Additional Info

- DESY safety requirements:
https://indico.desy.de/getFile.py/access?contribId=7&sessionId=5&resId=0&materialId=slides&confId=10685

  - Indico registration for the Belle II Test Beam
  - DACHS ID Card on site
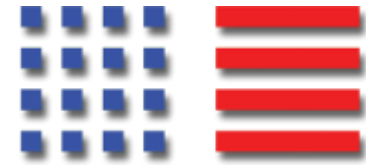 - Safety Course (Mondays 13h00)

- PXD Participants List:
https://docs.google.com/spreadsheets/d/1s6yj1QgzxW64QSZ5Ap6RQ332wl_IKFm5su9nvROEt40/edit#gid=0

- Logistics:
https://docs.google.com/spreadsheets/d/1_TASHzCRCjkKgByLdt1IXXMVPl1UBfBDuXpQODivy44/edit#gid=0

- AIDA TA finally available for 4 Japanese, 1 Indian and 1 Austrian scientists

- TB meetings held bi-weekly from on Fridays at 9h00 CET

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Thanks

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