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Mechanics Session at PANDA CM LI, FZ Jülich, Dec 10 2014

MEC Workshop October 2014

Installation Topics

General Tasks

Agenda of October Workshop



PANDA Mechanics Workshop
from Tuesday, 28 October 2014 (09:00) to Wednesday, 29 October 2014 (18:30)

: Sessions / : Talks : Breaks

Tuesday, 28 October 2014			Wednesday, 29 October 2014		
AM	09:00	Opening Session (until 11:00)	10:00	Presentations on Beampipe Status (until 11:00)	
	11:00	--- Coffee Break ---	11:00	--- Coffee Break ---	
	11:30	Presentations on BWE, STT, MVD Status (until 13:00)	11:30	Further Topics (until 13:00)	
PM	13:00	--- Lunch Break ---	13:00	--- Lunch Break ---	
	14:00	Design Work I (until 16:00)	14:00	Design Work III (until 16:00)	
	16:00	--- Coffee Break ---	16:00	--- Coffee Break ---	
	16:30	Design Work II (until 18:30)	16:30	Close out (until 18:30)	

- Opening session: Discuss agenda and way of working
- MVD/STT/BWE session
- Beampipe status
- Other topics

- Mounting of detectors
- Mechanical tolerances (static/dynamic)
- Split setup of STT?

- Cable & supplies routing
- Patch panels
- Electronics placement
- Auxiliary platform

- Common installation platform
- Movement, installation and maintenance
- Alignment, reproducibility

● Beampipe

● Vacuum considerations

- Pumping power
- RF grids

● Movement of upstream pump for MVD/STT/BWE

● Prototyping

● DIRC Mechanics

- Large common installation platform:
 - Accommodate MVD/STT, BWE EMC, Barrel DIRC, SciTil, Barrel EMC
 - Easier logistics for installation
- Homework
 - Service requirements of MVD
 - Cable routing & patch panels
 - Static and dynamic tolerances
- DIRC mechanics may be needed early

- Modularity and Interdependence
 - Modular equipments for easier installation and maintenance
 - Coordinate mechanics work packages of interdependent systems
 - Impact on work package schedule
- Sequence and Schedule
 - Impact of installation sequence on schedule
 - Impact of schedule on installation sequence
- General resources
 - Space requirements
 - Tooling and environment
 - Responsibilities and manpower (from group and from hostlab)

- Open design issues in EMC:
 - Location of EMC HV supplies: Are ISEG supplies radiation fragile?
 - Size and placement of EMC cooling manifold
- Installation platform
 - Specifications (accuracy, weight load)
 - When do we need to fix this?
 - Who will design this?
- Maintenance concept
 - Recommended: MTBF analysis vs. accessibility
 - Consequence: Mechanical design should respect also maintenance

- Concept for alignment system
- Target platform on top of solenoid
- Auxiliary platform upstream
- Mounting platform up-upstream
- General powering scheme
- Grounding scheme
- General gas distribution system

Principal question:

→ Which institutes would be willing to take up such general tasks

- Distribution of work
- Collection of missing topics
- Next MEC workshop in spring 2015:
 - More news from magnet
 - Answers to EMC issues
 - Barrel EMC installation !!!
 - Overall installation sequence