# PANDA MEC



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

MEC Workshop October 2014

**Installation Topics** 

**General Tasks** 



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## **Agenda of October Workshop**



		hanics Workshop y, 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



# MVD/STT/BWE 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 and Other Topics**



- Beampipe
- Vacuum considerations
  - Pumping power
  - RF grids
- Movement of upstream pump for MVD/STT/BWE
- Prototyping

DIRC Mechanics



### Conclusions



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



### Installation Topics

Modularity and Interdependence

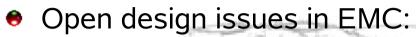
- Modular equipments for easier installation and maintenance
- Coordinate mechanics work packages of interdependent systems
- Impact on work package schedule
- Sequence and Schedule
  - Impact of installation sequence on schedule
  - Impact of schedule on installation sequence
- General resources
  -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



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#### **Installation Topics**

### **Issues for Discussion**



- 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



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### **General Tasks**



- 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





### **Follow-up**



- 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



