



Status of works on the Collaboration Contract between IHEP and FAIR

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on behalf of the IHEP-Protvino group



Major milestones for the EMC Barrel Mechanics

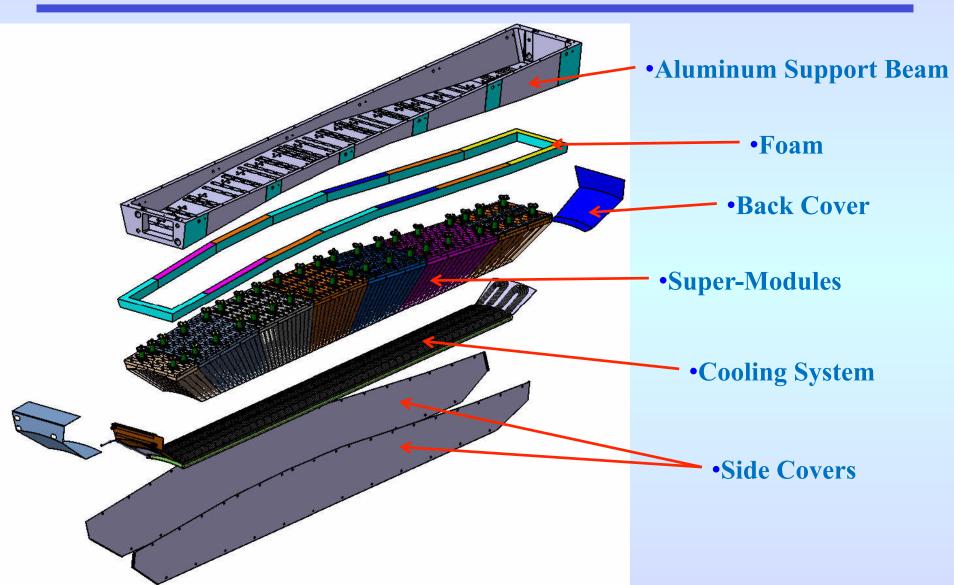


Mile- stone	Work Description	Prerequisites to start work / procurement	Validation Criteria	Date	
Pre-Se	ries Slice				
1.1 M6	Finalise technical specifications		Technical specifica- tions	Nov 2013	
1.2	Design and delivery of 3D model and design of main support structures (support beam, support feet, module plate)	0.0, 1.1	Delivered 3D model and design drawings	Apr 2014	
1.3 M7	Develop design documentation for Pre- Series Slice	0.0, 0.1, 1.1	Final Design Review for Pre-Series Slice	Sep 2014	Pending
1.4	Production and delivery of batch 1 of Pre-Series Slice (PSS-B1)	1.2	SAT Aa for PSS-B1	Mar 2015	
1.5	Production and delivery of all remaining components (batch 2) for Pre-Series Slice (PSS-B2)	1.3	SAT Aa for PSS-B2	Sep 2015	
1.6 M8	Testing of Pre-Series Slice	1.5	SAT Ab for mechanics of Pre-Series Slice	Mar 2016	



Design of EMC Barrel slice (by Valery Ferapontov)







Single carbon alveoli precise cut





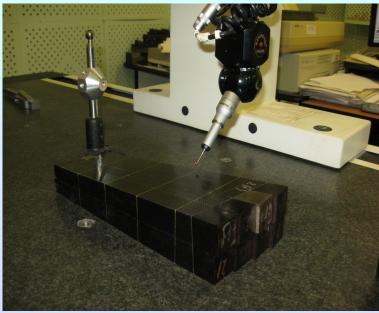




Single alveoli mass production and quality control









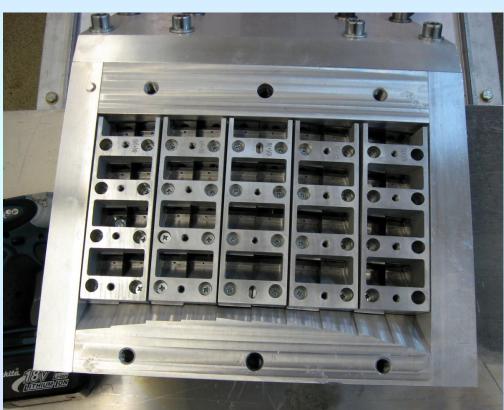
PANDA Collaboration meeting at Giessen, March 2015

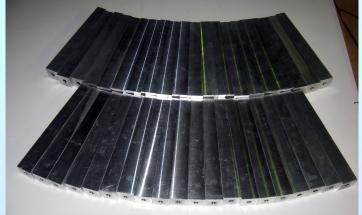


Alveoli pack manufacturing



5 single alveoli units filled up with the "dummy crystals" and jointed with a glue are in the assembly device together with rear inserts and intermediate plates







Alveoli pack manufacturing



Assembly device is being placed in the oven





Alveoli pack with rear inserts and intermediate plates

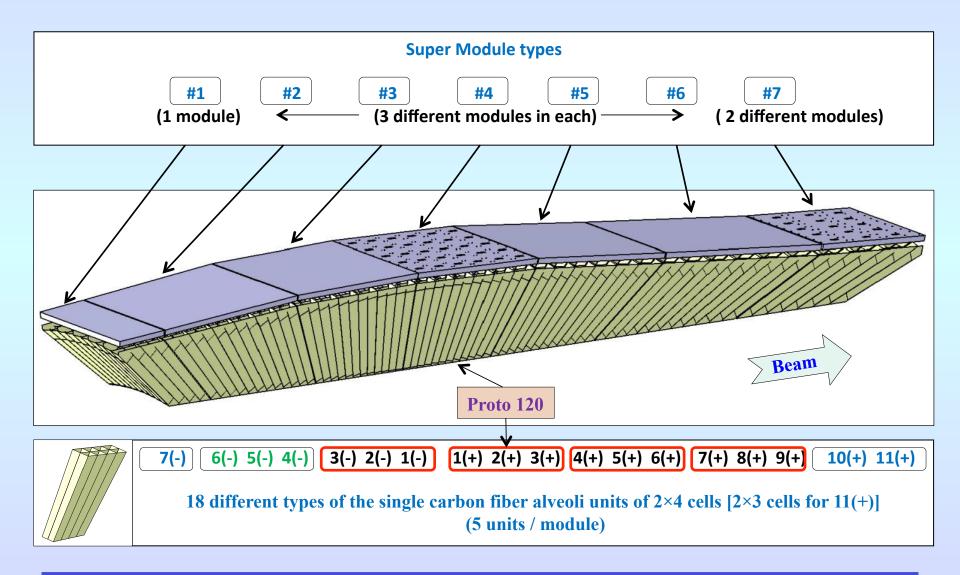






Crystals support structure

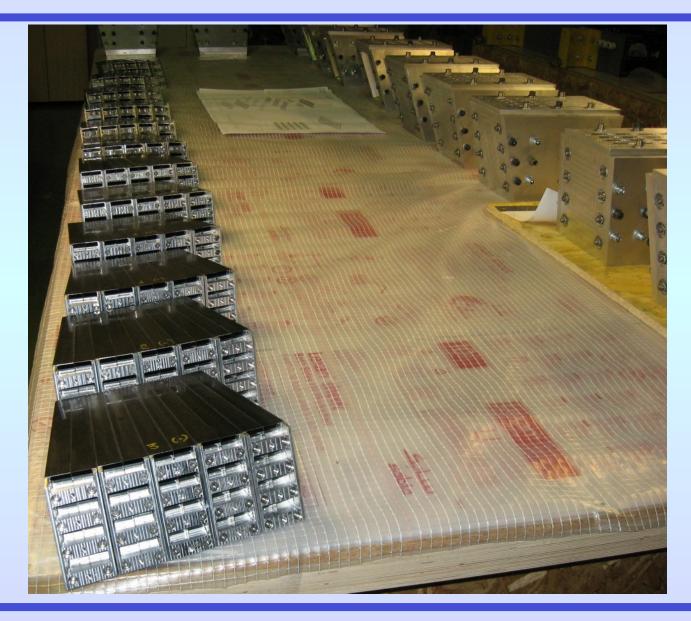






Crystals support structure







Crystals support structure

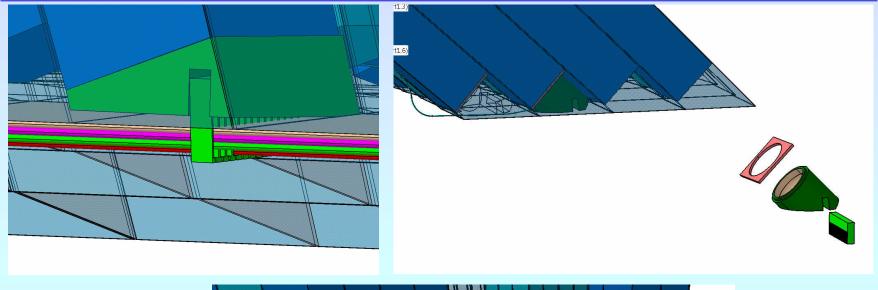


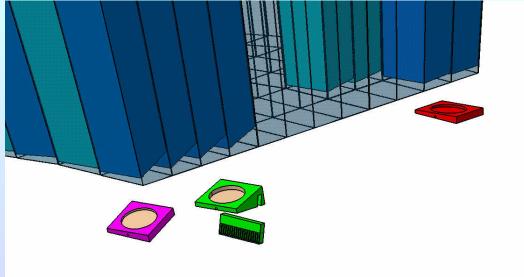




Design of front inserts and optical fibers tracing (Suggested by V. Ferapontov and A. Levin)



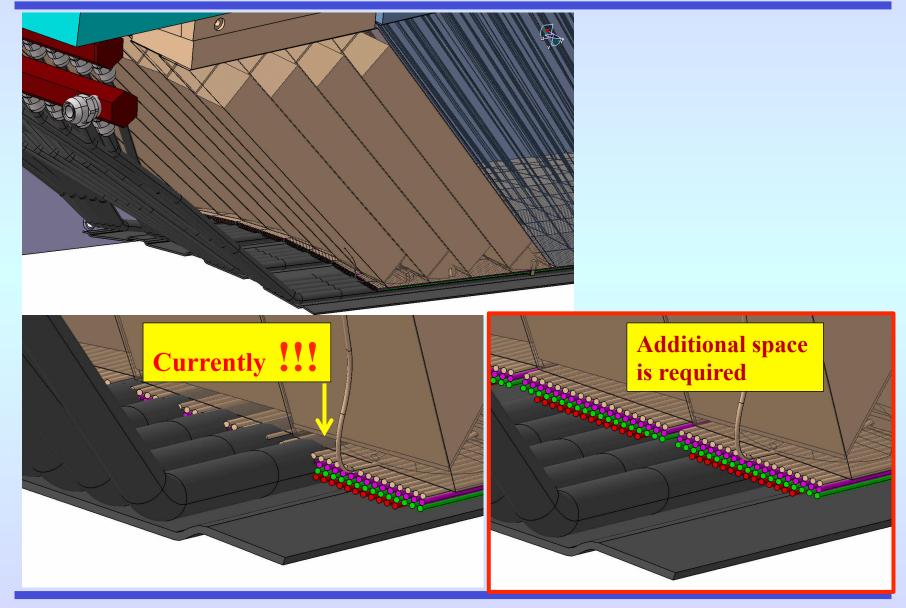






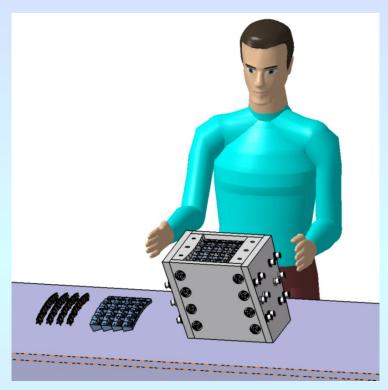
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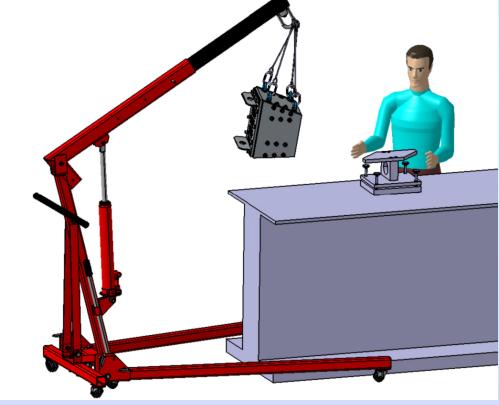






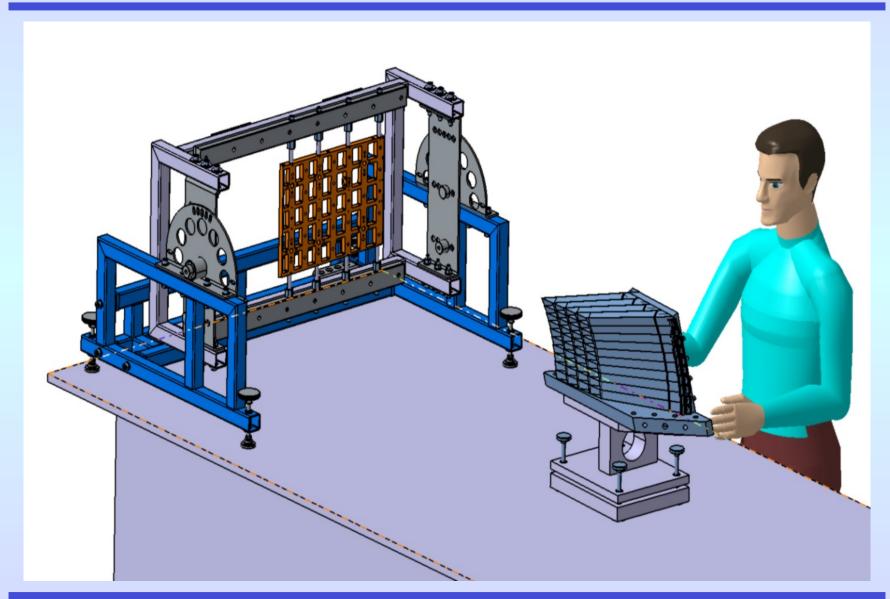






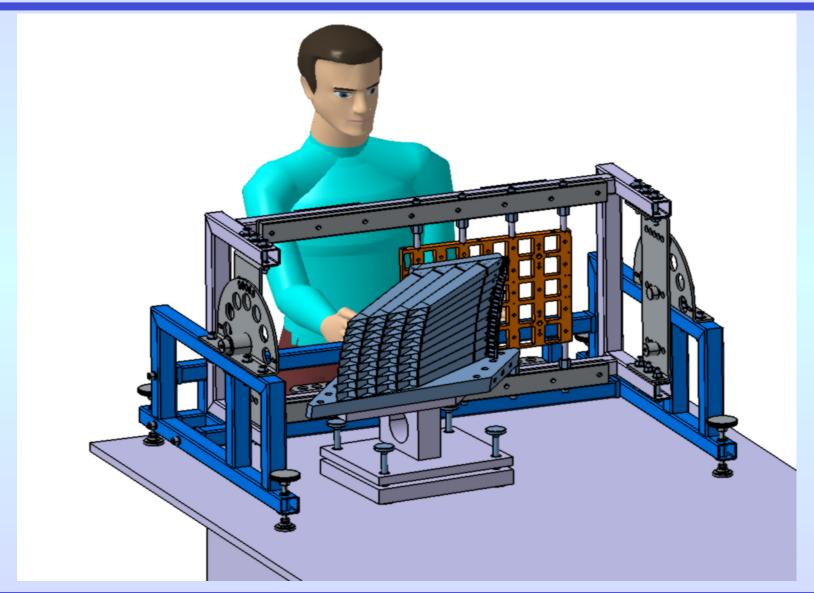






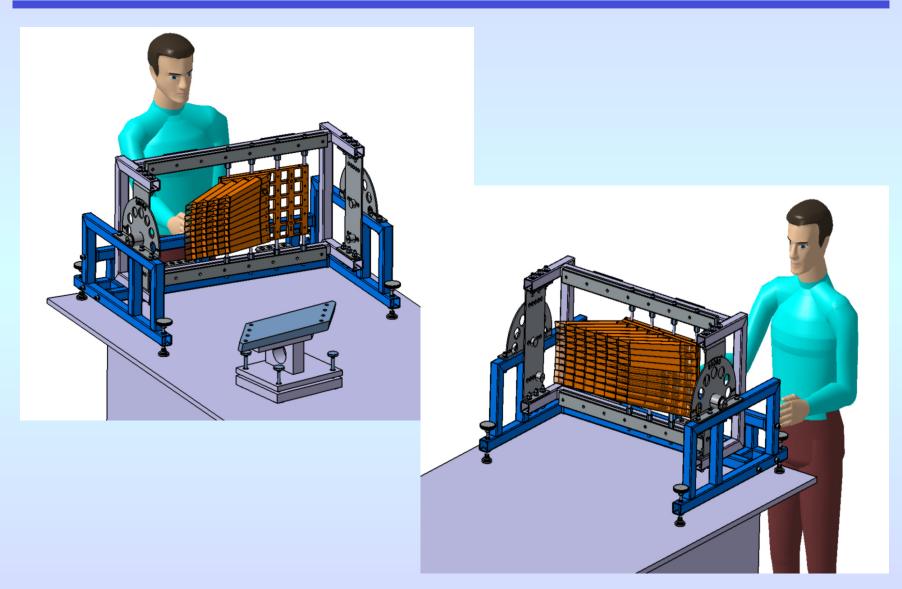






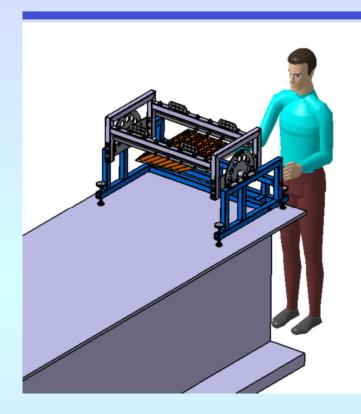


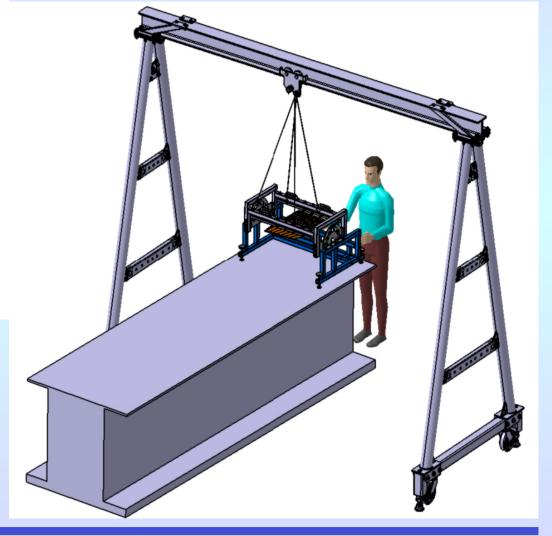






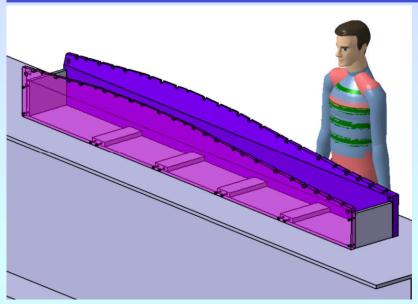


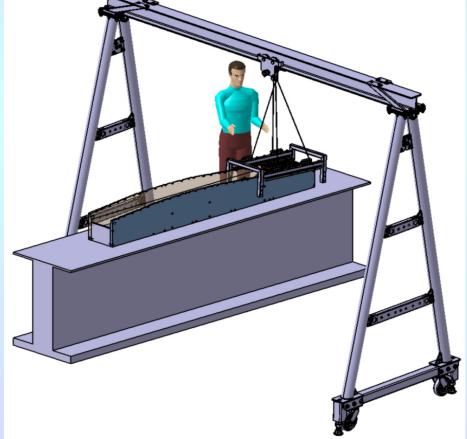






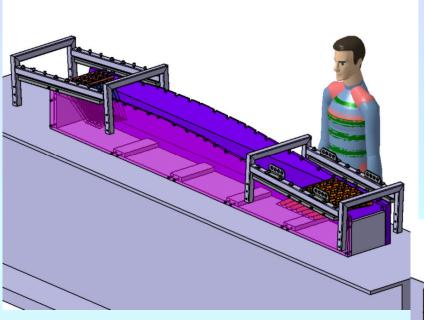


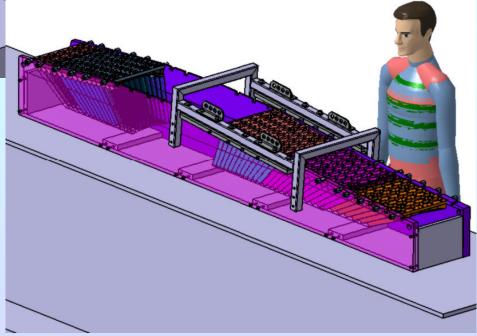






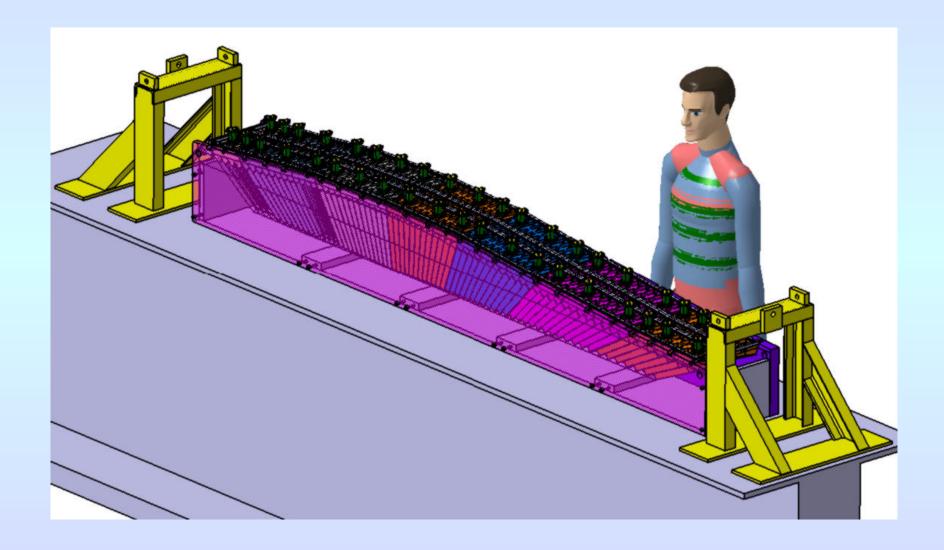






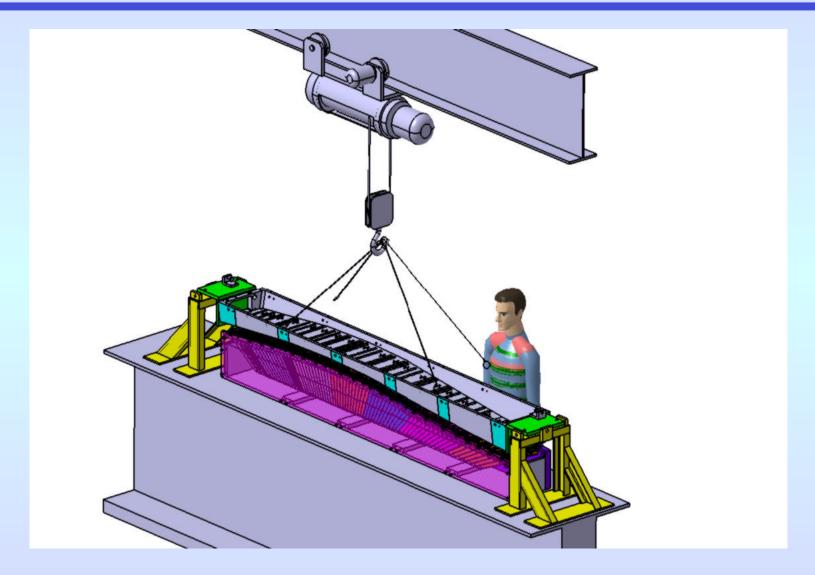






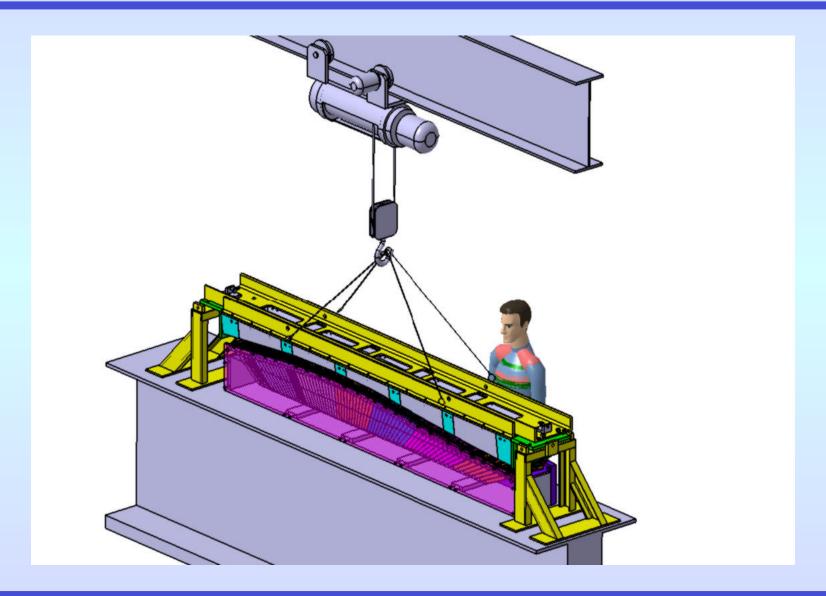






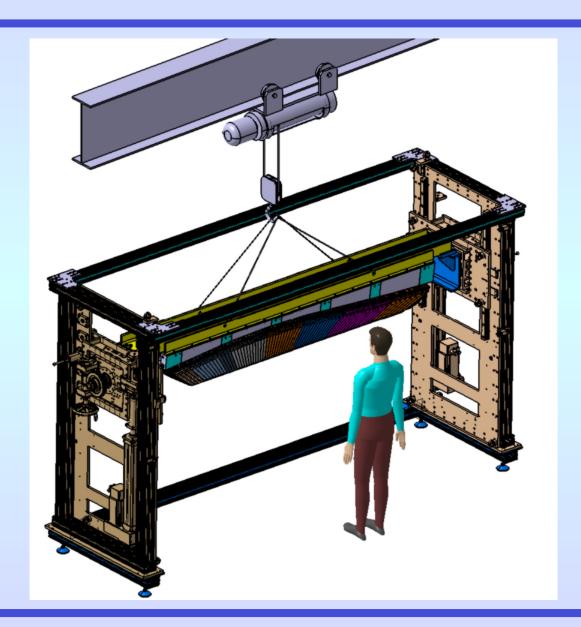














Summary and open questions



- Batch 1 of the pre-series slice including assembling devices is prepared for shipment to Giessen.
- We expect to get all 18 types of molds and in May production of the alveoli packs for the Batch 2 of the pre-series slice will be completed in time (September 2015).
- Assembling scenario was developed additional tools and devices will be necessary to execute this work. We need a plan of the working space where the slice will be assembled.
- Production of back module plates, support feet and support beam was not started because the complete design of the pre-series slice is not yet approved unsuccessful PROTO120 tests!!! back module plates and support feet for the pre-series slice have significantly different design compared to those parts of PROTO120
- Design of front inserts was suggested and some prototype was made at Giessen waiting for the final solution about the monitoring system
- ☐ Final solution on the electronics & cables inside the support beam PROTO 120 test !!!