

The current status of works at IHEP on the barrel mechanics

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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-Series Slice				
1.1 M6	Finalise technical specifications		Technical specifications	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
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

Pending...

Delivered without tools

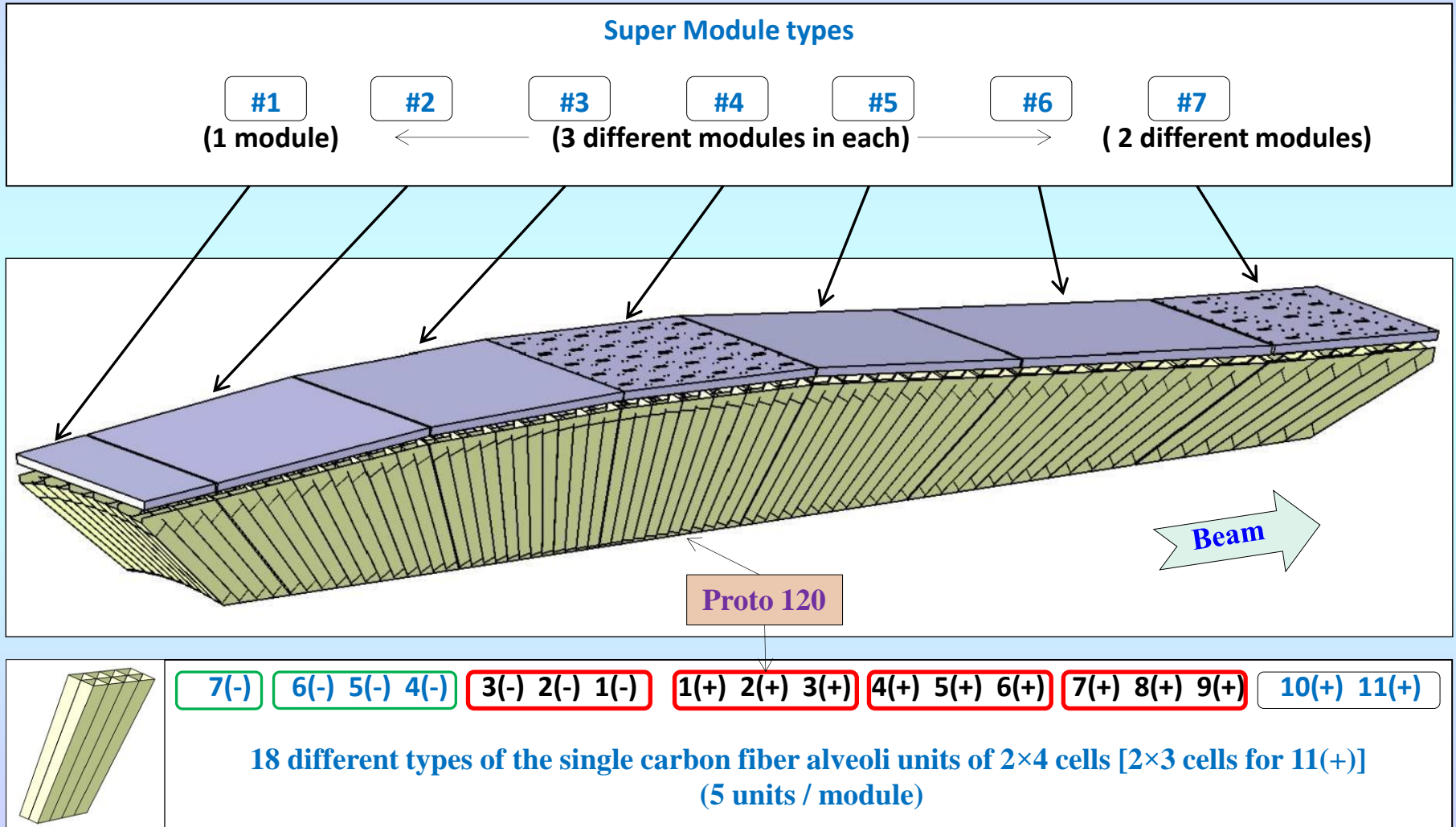
Production in progress
Delivery is postponed

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12 modules of crystals support structure



Crystals modular support structure

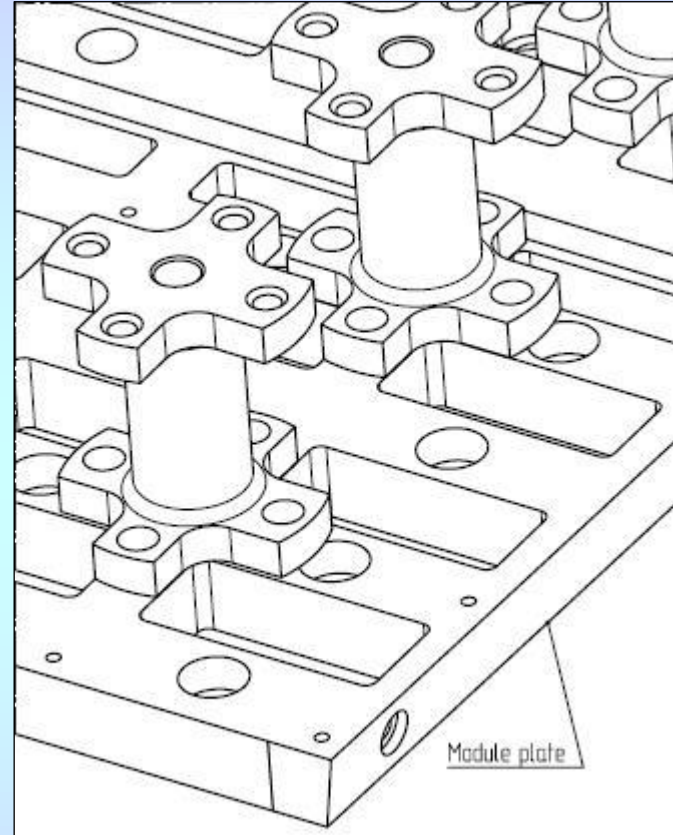


Proto-120 modifications

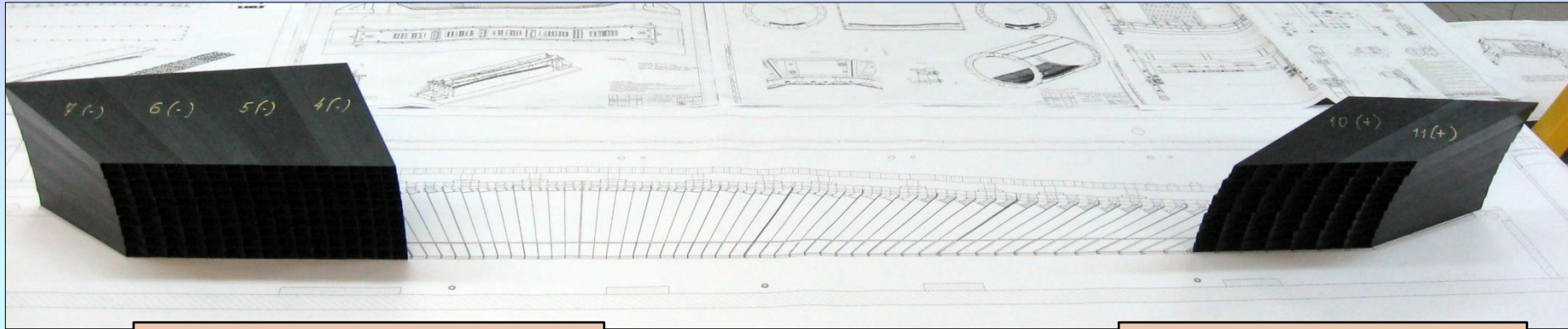
- Specialists from IHEP visited Giessen in July
- New alveoli packs of type 1(+), 2(+), 3(+) were delivered
- Necessary works were discussed, and beginning of reassembling was planned on October, 5

- New design of the module plate, support feet, support plate and components of the cooling system was developed in July.
- The end of production in Germany is scheduled on October, 2.

FINAL DECISION IN OCTOBER?

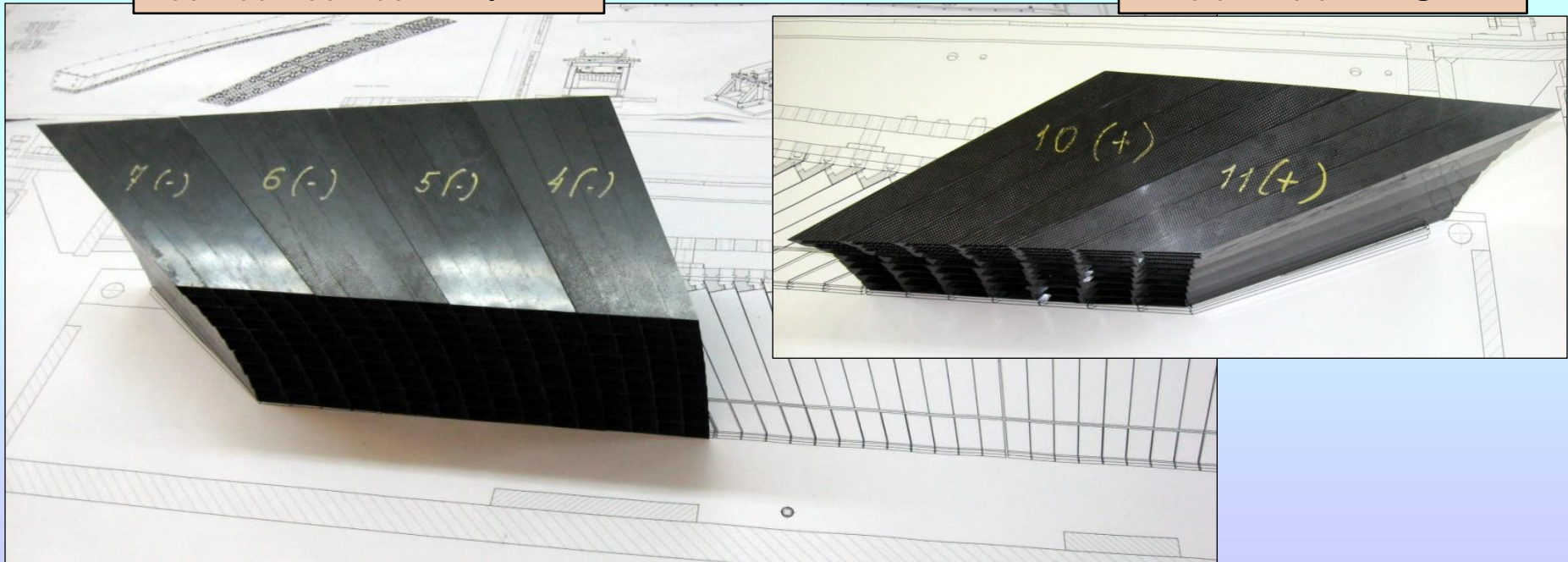


Six alveoli packs for super modules of type #1, #2 and #7



7(-) 6(-) 5(-) 4(-), completed

10(+) 11(+), not glued



- *Manufacturing and quality control of single carbon alveoli units of different types is in progress. About 72% of necessary for the barrel assembly quantity were produced.*
 - *Manufacturing of devices and tools for the slice assembling is in progress.*
 - *Waiting for the price estimate of pre-series support beam and support feet of a new design.*
 - *Production of back module plates, support feet and support beam will be started hopefully in October after PROTO-120 reassembly.*
 - *Delivery of Batch 2 of the pre-series slice is postponed (mutual agreement between IHEP and FAIR) and planned in the March - April, 2016.*
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- ☐ *Front inserts - waiting for the final solution about the monitoring system*
 - ☐ *Cooling system design and integration - ???*