



sPHENIX EMCal Module Prototyping and Production Plan in China

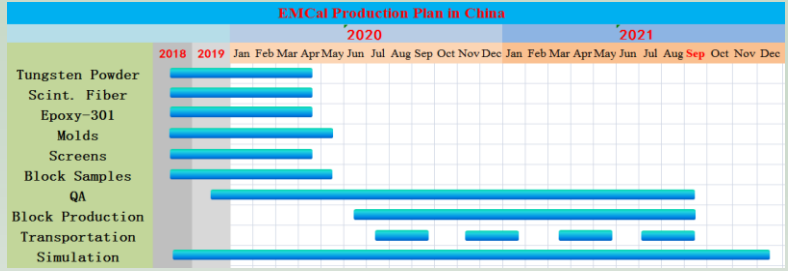
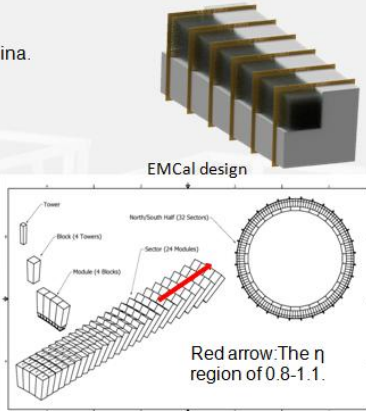
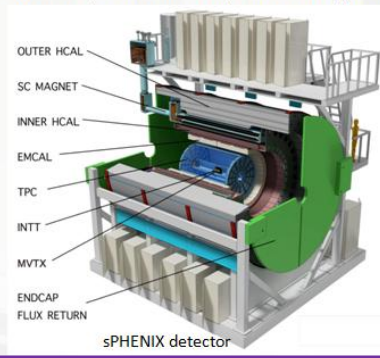
Weihu Ma (Fudan University), for the sPHENIX Collaboration



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Abstract: The sPHENIX detector at BNL's Relativistic Heavy Ion Collider (RHIC) will probe the strongly interacting Quark-Gluon Plasma (QGP) with jets, heavy flavor tagged jets and Upsilon production. The sPHENIX electromagnetic calorimeter (EMCal) detector is essential for these measurements. The Chinese sPHENIX EMCal Consortium includes groups from Fudan, PKU and CIAE, and the consortium is planning to build sPHENIX EMCal modules covering the pseudorapidity range $\pm(0.8-1.1)$, significantly extending the experimental acceptance and greatly enhancing the physics capability for jets and Upsilon measurements. We will show the status of the Chinese prototyping project including investigations on the quality of tungsten powder from Chinese vendors and the quality assurance procedures under development. We will also report on the status of our development of a machine to precisely place scintillating fibers automatically.

- > sPHENIX design and EMCal design.
- > Materials, Production flow, and Laboratory in China.



The EMCal is designed as a cylinder and will consist of 6144 blocks, covering the η region of 0.0-1.1 and the 2π azimuth angle. The EMCal block design consists of a matrix of scintillating fibers embedded in the absorber material of Tungsten powder infused with epoxy (W/SciFi). The Chinese consortium plans to build the sPHENIX EMCal modules covering the η region of $\pm(0.8-1.1)$, approximately 20% of the EMCal modules.

