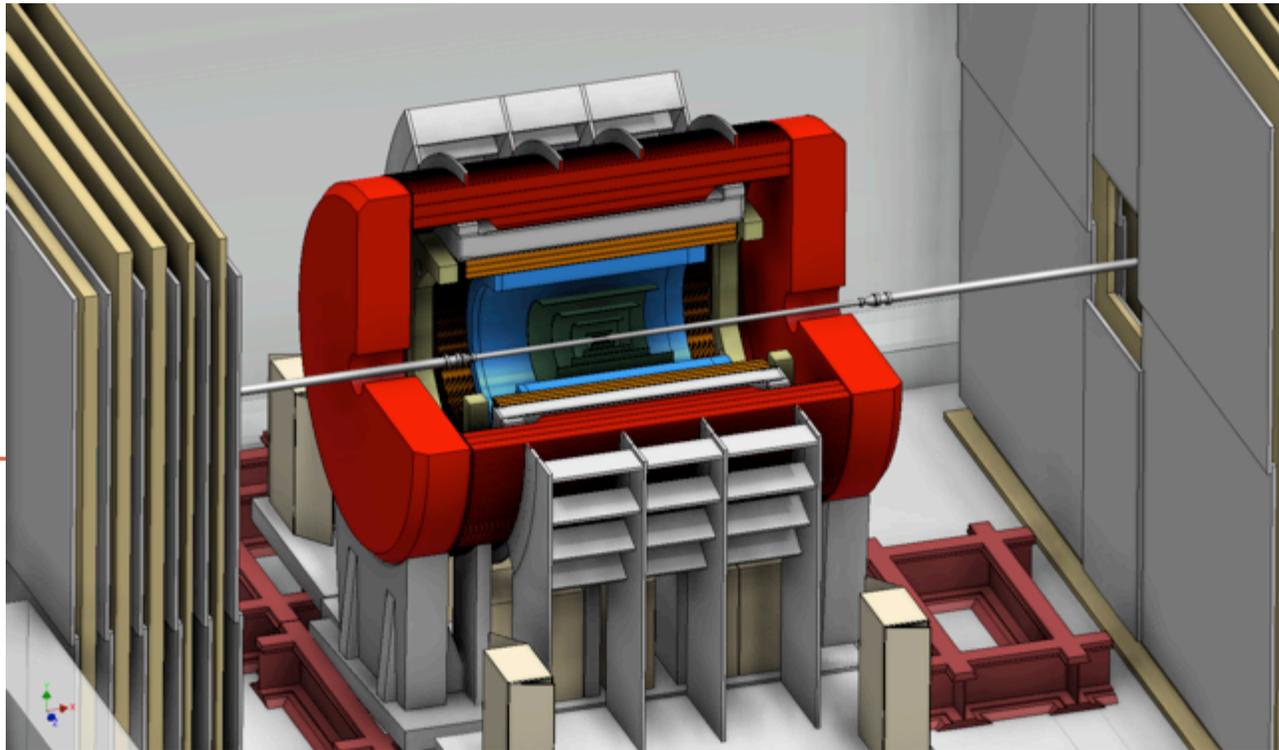


SPHENIX MECHANICAL



D. Lynch

August 14, 2014

AGENDA:

- Magnet update
- sPHENIX Design Update
- sPHENIX Installation Plan
- sPHENIX Tasks Next 2 Months
- AOB

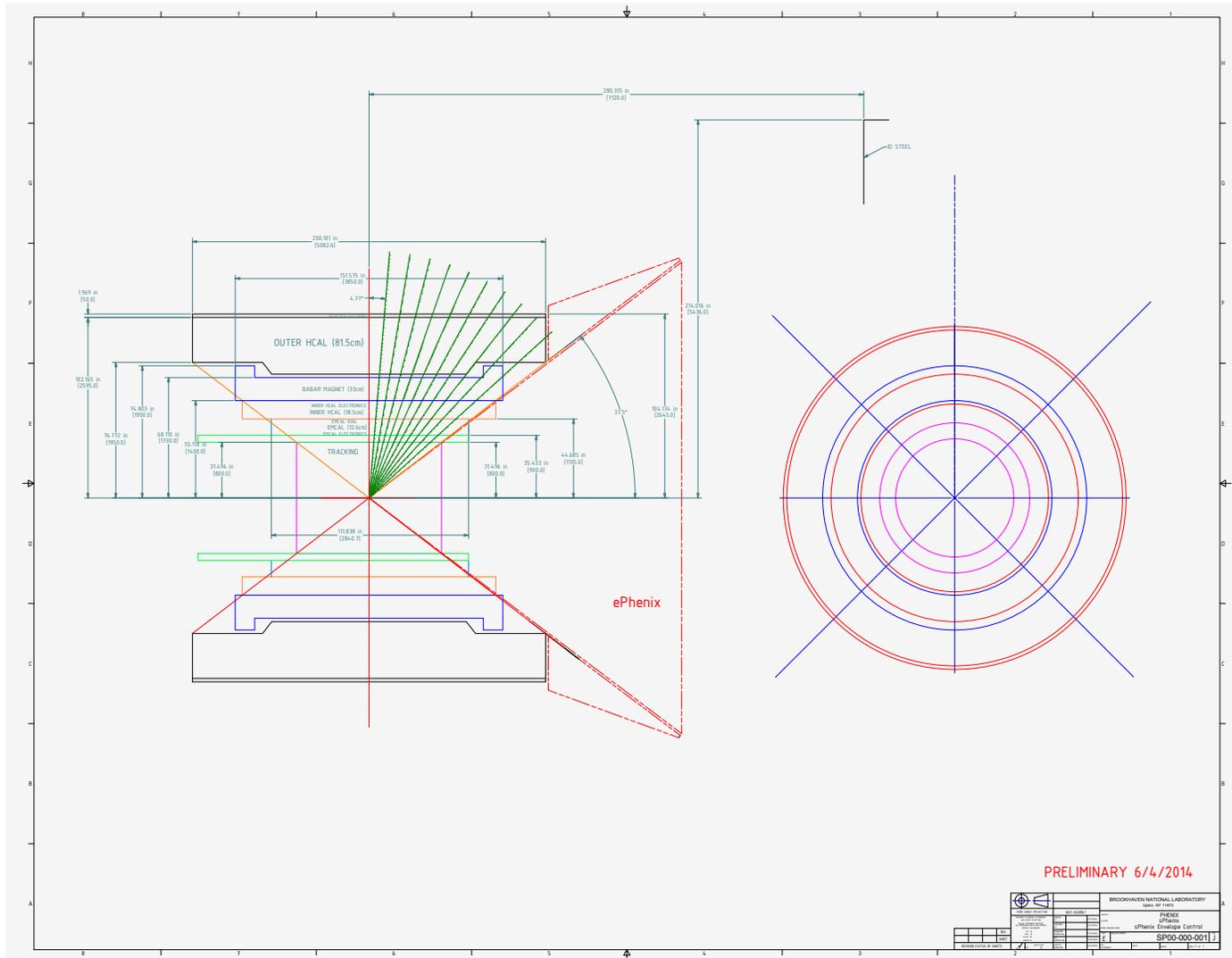
Magnet Update

- Review with Pasquale Fabbricatore, Wesley Craddock, and Mike Racine uncovered only one loose end (need to secure leads inside valve box)
 - Paul Kovach has now designed a couple of additional fixtures to stabilize the leads
- In the meantime, Mike Racine has completed crating all the other equipment at SLAC
- DOE paperwork for the move is complete
- CAST is chosen for transport, contract in place waiting for data; air-ride truck, no additional suspension
- Accelerometers and GPS tracking
- Arranging to send team to SLAC before Sep 10
- Review of critical lift being coordinated by Dave Phillips
- Work Planning for both SLAC and BNL ends of the trip needed
- (When the Magnet gets here we stop referring to it as the BABAR Magnet and begin referring to it as the sPHENIX Magnet)

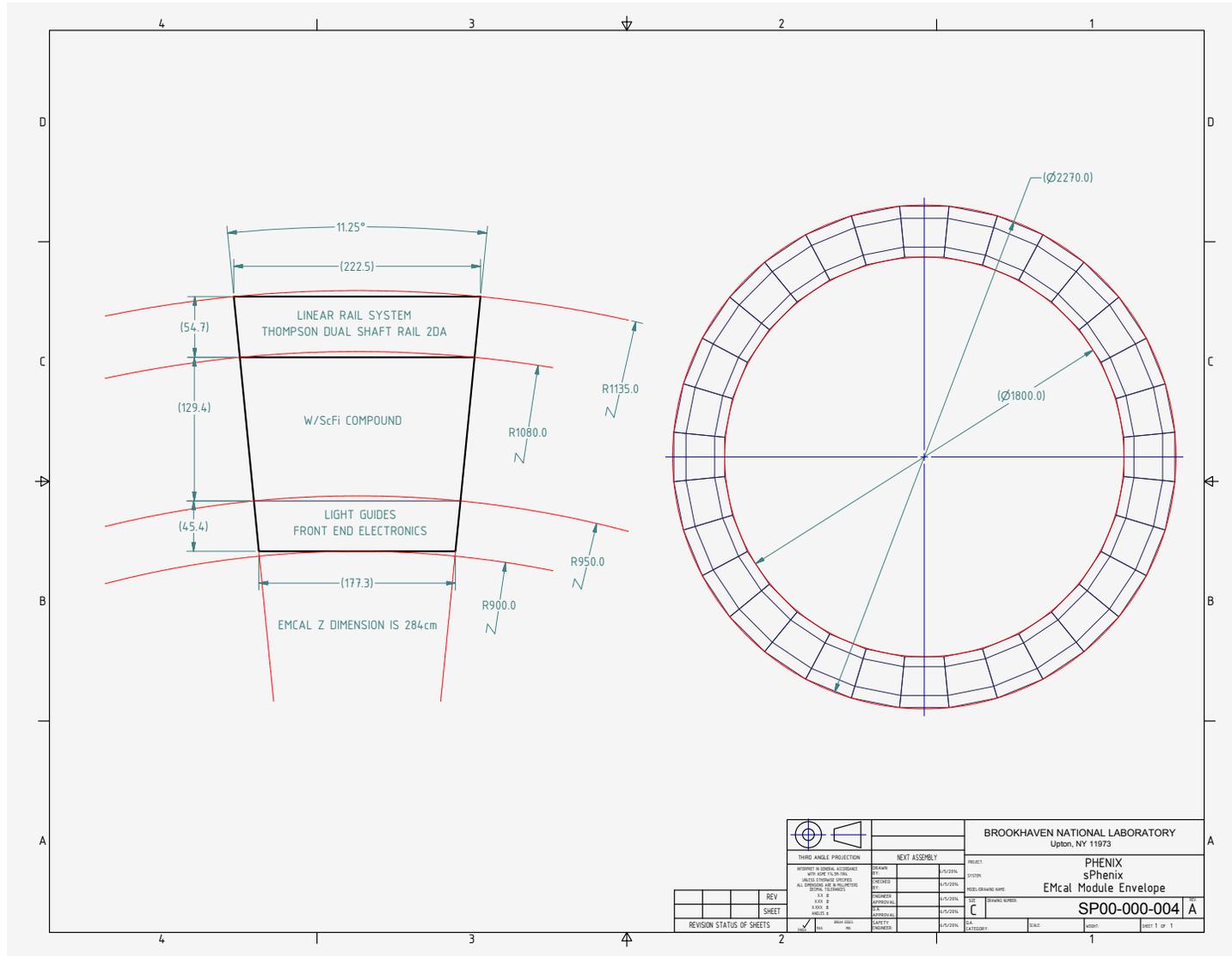
sPHENIX Design

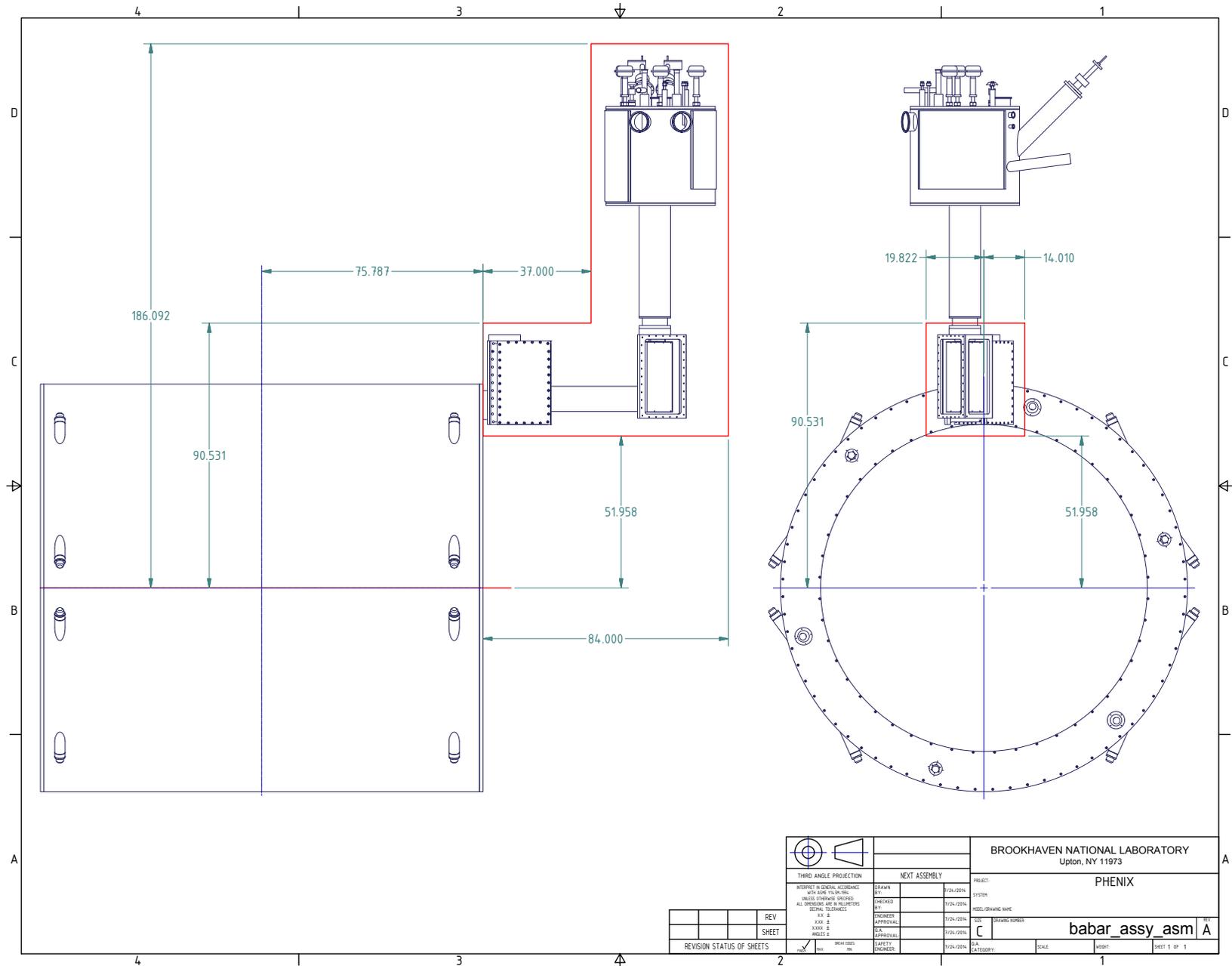
- No recent changes to envelope drawings
 - Expect to add support structure envelop
 - Inner support structure plan is evolving
- sPHENIX Assembly Plan in development
- Design Specification Documents being prepared for:
 - 1) **Global system (includes decommissioning, infrastructure & installation)**
 - 2) **HCal Outer**
 - 3) **HCal Inner**
 - 4) **EMCal**
 - 5) **Calorimeter Electronics**
 - 6) **DAQ/Trigger**
 - 7) **Tracker**
 - 8) **Magnet**

- sPHENIX Design Update: No change to envelope since last meeting



sPHENIX EMCal Envelope





REV	DATE	DESCRIPTION

				BROOKHAVEN NATIONAL LABORATORY Upton, NY 11973	
THIRD ANGLE PROJECTION INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.3-2003 UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS DECIMAL TOLERANCES XXX ± XXX & ANGLES ±		DRAWN BY: F124/2014 CHECKED BY: F124/2014 ENGINEER APPROVAL: F124/2014 SAFETY ENGINEER: F124/2014		PROJECT: PHENIX SYSTEM: MODEL/DRAWING NAME: SEE DRAWING NUMBER:	
REVISION STATUS OF SHEETS		SHEET: C		DRAWING NUMBER: babar_assy_asm A	
SCALE:		CATEGORY:		SHEET 1 OF 1	

sPHENIX Assembly Plan

1. BABAR magnet transported to PHENIX possession in bldg 912 test area. BABAR Magnet becomes sPHENIX magnet
2. sPHENIX magnet tested at 912
3. Stack modifications designed and built (location TBD)
4. HCal outer, HCal Inner, EMCal, Tracking detector, global support structure, global infrastructure and assembly/installation fixtures design and procurement
5. HCal outer, HCal Inner, EMCal and Tracking detector assembled into modules and tested at assembly areas (TBD) away from 1008

(End of run 16)

6. PHENIX Decommissioning
7. Global support structure and global infrastructure components assembled and installed at 1008 AH and IR as appropriate

(End of Run 17)

1. West Carriage (WC) assembled at 1008 AH then moved to IR
2. 1/4 of HCal outer transported to 1008 AH
3. Central Pedestal (CP) and 1/4 of HCal Outer assembled at 1008 AH
4. sPHENIX Magnet Transported to 1008 and mounted on CP
5. All Inner HCal modules transported to 1008 AH

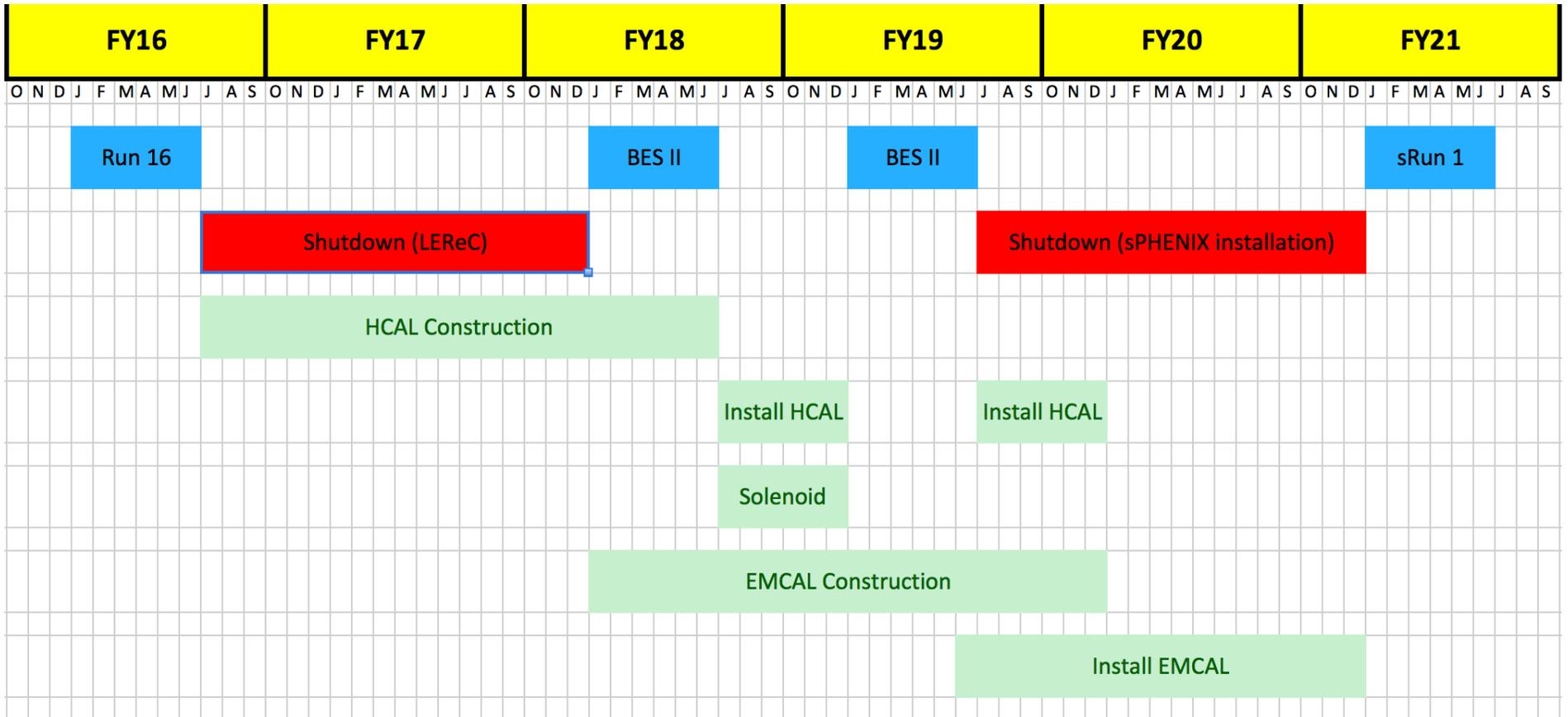
sPHENIX Assembly Plan cont'd)

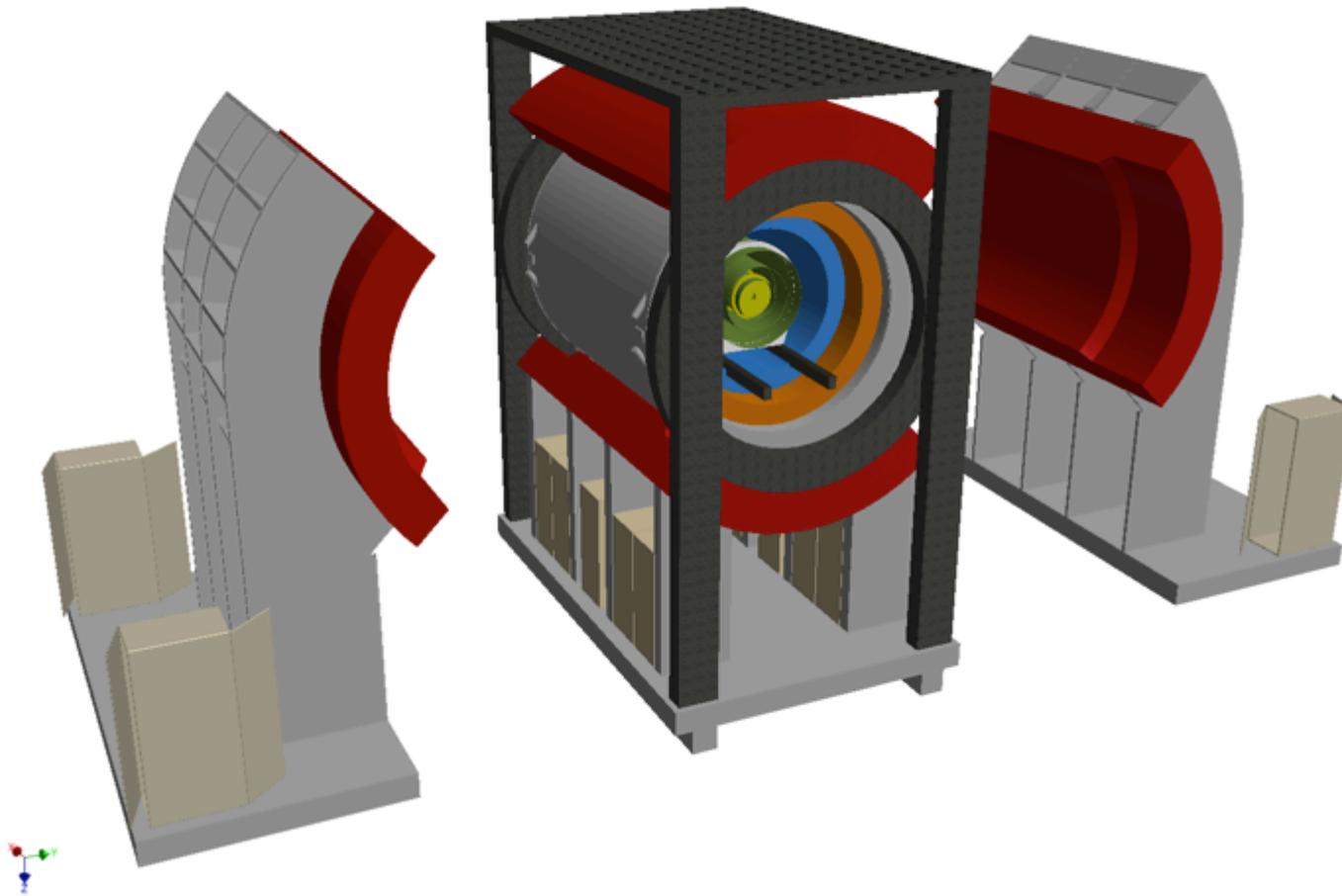
13. Inner support structure assembled with installation fixture, all Inner HCal mounted on Inner support structure then this assembly inserted into Magnet and Inner support structure mounting hardware (connecting Inner support structure to lower Outer HCal and/or CP)
14. Upper Outer HCal support connected to inner support and lower HCal support/CP
15. Move step 13 structure to IR, Install Beam pipe
(End of Run 18)
13. WC Outer HCal modules and Upper Outer HCal modules (1/4 of total each) transported to 1008
14. Outer HCal modules assembled on WC and CP
15. CP upper rack platform installed on CP above Outer HCal
16. Racks and Cables installed and routed for Inner and Outer HCal modules on CP and WC
17. Infrastructure services connected to sPHENIX Magnet, CP, WC, Inner and Outer HCal on CP and WC
18. All EMCAL modules installed inside Magnet in IR

sPHENIX Assembly Plan cont'd)

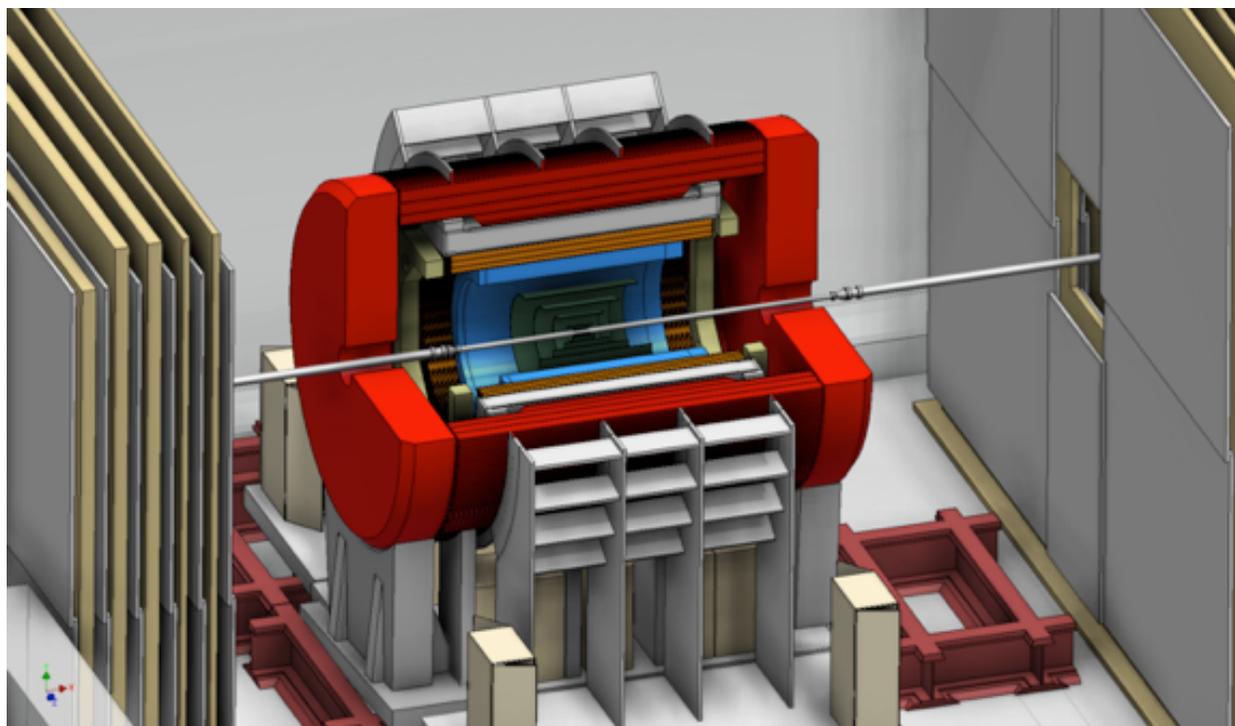
22. EMCal racks, cables and infrastructure services installed on CP
23. Tracking modules installed inside Magnet in IR
24. Tracking module racks, cables and infrastructure services installed on CP
25. East Carriage (EC) assembled in IR
26. Remaining 1/4 of Outer HCal modules installed on EC
27. EC Outer HCal racks, cables and infrastructure services installed on EC.
28. EC moved to IR
29. sPHENIX Commissioning

sPHENIX schedule





Initial concept for external support,
racks and upper bridge platform



Basic sPHENIX model cutaway

Work for the Next Two Months

- **Finish WBS including dictionary**
 - Import to MS-Project
 - Add task durations and milestones to create v1 of the schedule
 - Define resources
- **Begin design packages for sPHENIX reference design**
 - 1) Global system
 - 2) HCal Outer
 - 3) HCal Inner
 - 4) EMCal
 - 5) Calorimeter Electronics
 - 6) DAQ/Trigger
 - 7) Tracker
 - 8) Magnet
 - 9) Decommissioning
- **Begin Cost estimate spreadsheets**
- **Start on Basis of Estimate documents**
- **Finalize R&D plan for the next 2 years**
- **Identify issues that require a down-select process and define the process**
- **Start on other support documentation including Cost Book**