Space Frame modifications and Subway Addition

Rev 0.0

DHK 11/17/2010

General Statement:

We need to get this project out to Facilities by February 2011 to start the final construction design based on the reference design. Before we do this we need to do our own final review of our design. I have done some thinking about it and would like to have an internal review. Before that we need to do some things.

Lionel – Get or calculate the final Solenoid weight

Group – Verify maximum weights and CG of all detectors and support systems connected to the Solenoid

 SVT=200kg Z=~-1200mm (old)

MM =500 kg Z=~-1300mm (11/17/2010)

Neutron = 1200Kg Z~-1200 mm??

CTOF =2500kg Z=-450mm

Bob or Saptarshi or ME group engineer – FEA on Solenoid Cart design, bearing and rail loads

Drawings are located at the following links (NOV11 sheets 1 through 4)

http://www.jlab.org/~jjrobert/SUBWAY/

Questions on design

1. Are the rails for the solenoid far enough apart? Could they be further? Would it help or is it needed?
2. Should/could the new deck be higher off the floor?
3. Is there any reason to make it wider (mostly to the North) to add racks or other??
4. Do the connections to the Solenoid interfere with the upper structure (L3)?
5. Do we want to have a removable deck with hand rails to allow crossing the level 2 over the beam line? (We have one now but it may need modification and or relocation and certainly hand rails.)
6. Can we have a simple, safe and easy to install filler for the level 1 deck between the rails where it must be opened for solenoid pull back? (hinging, sliding or just light weight or something else?)
7. Is the current set of drawings complete with all requirements and loads?
8. Do we want track covers to be part of the package?
9. Need to update weights in notes 6 and 7
10. Is 350 psf the right deck loading? What was used for the rest of the space frame.
11. Pete did a review of the drawings, what of his comments do we want to incorporate?