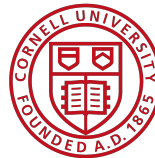


# Status of the LERF for LCLS-II CM Testing

K. Jordan      30 – Jan - 2018



NATIONAL  
ACCELERATOR  
LABORATORY



**Fermilab**

**Jefferson Lab**



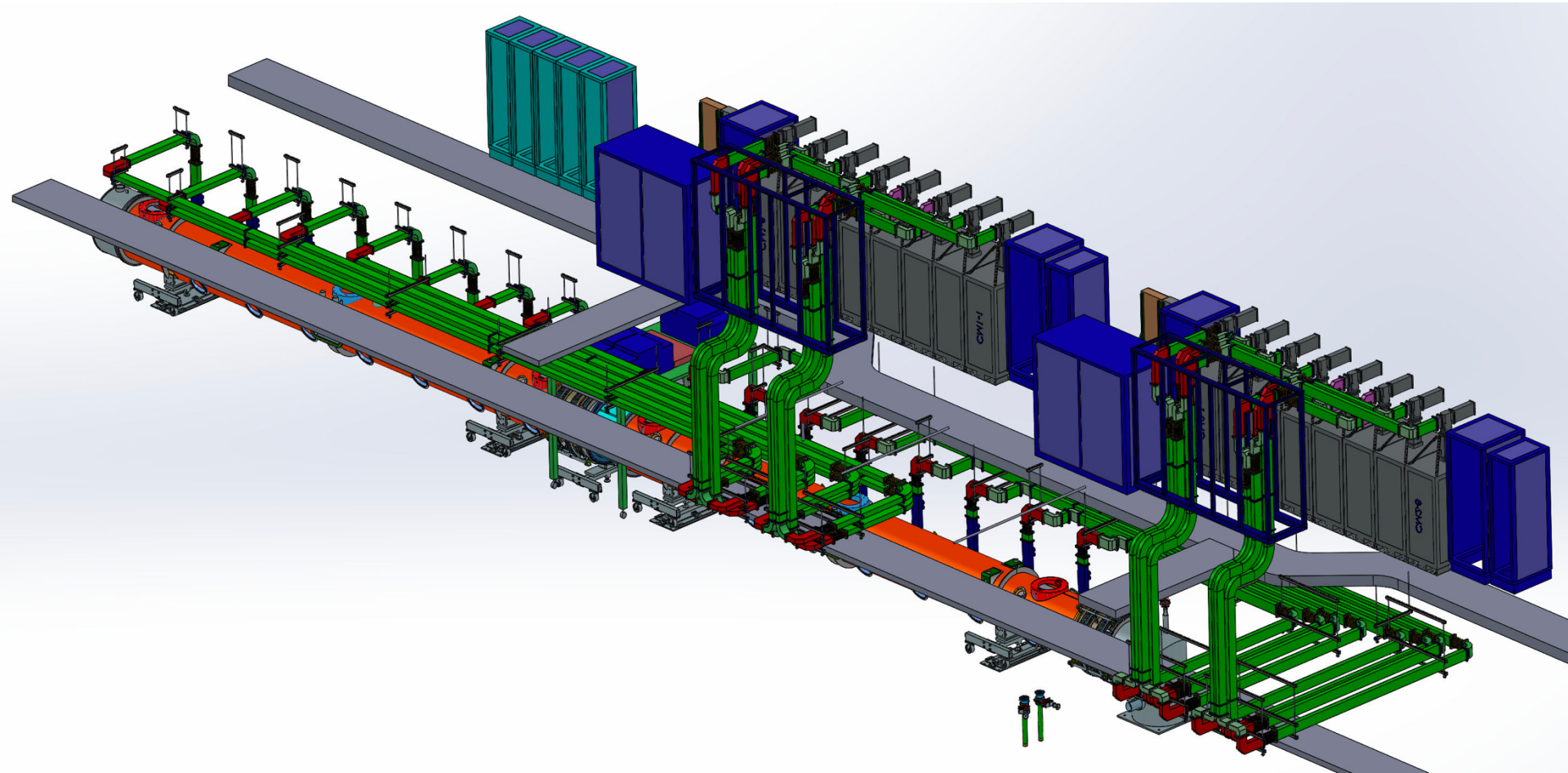
# Outline

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- Waveguide
- Gallery / SSA
- Computer & network infrastructure
- Summary

# Waveguide

- Layout for system



# Waveguide

- > 80% strait sections & bellows delivered
- Nuts, bolts, & gaskets are here
- Begin hanging waveguide this week





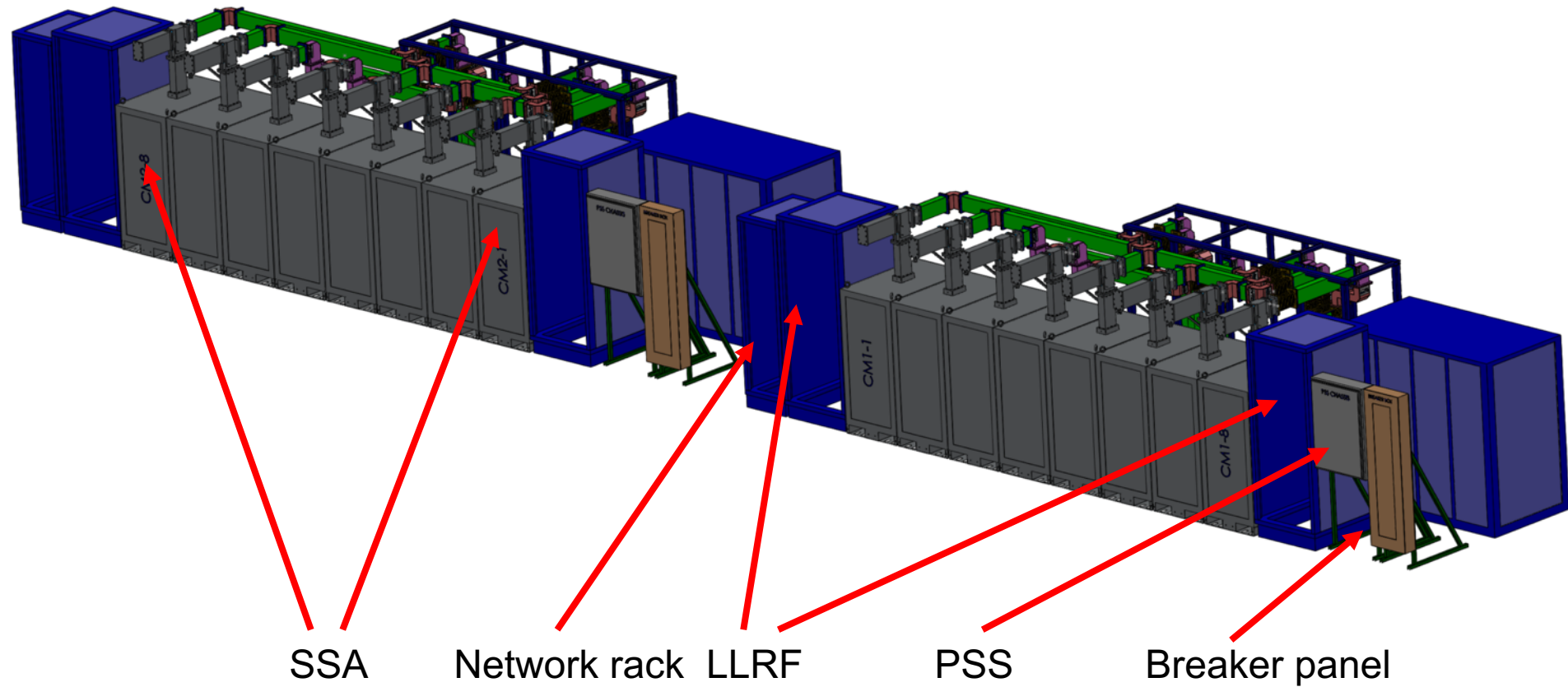
# Waveguide

- 2 power ratchets to help with installation of waveguide



# SSA Layout in Gallery

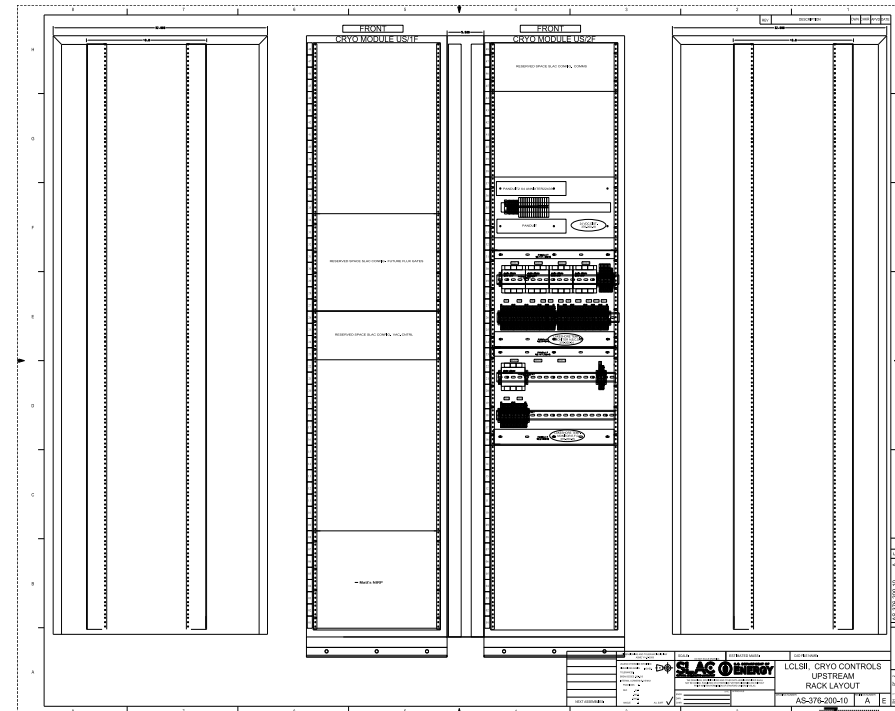
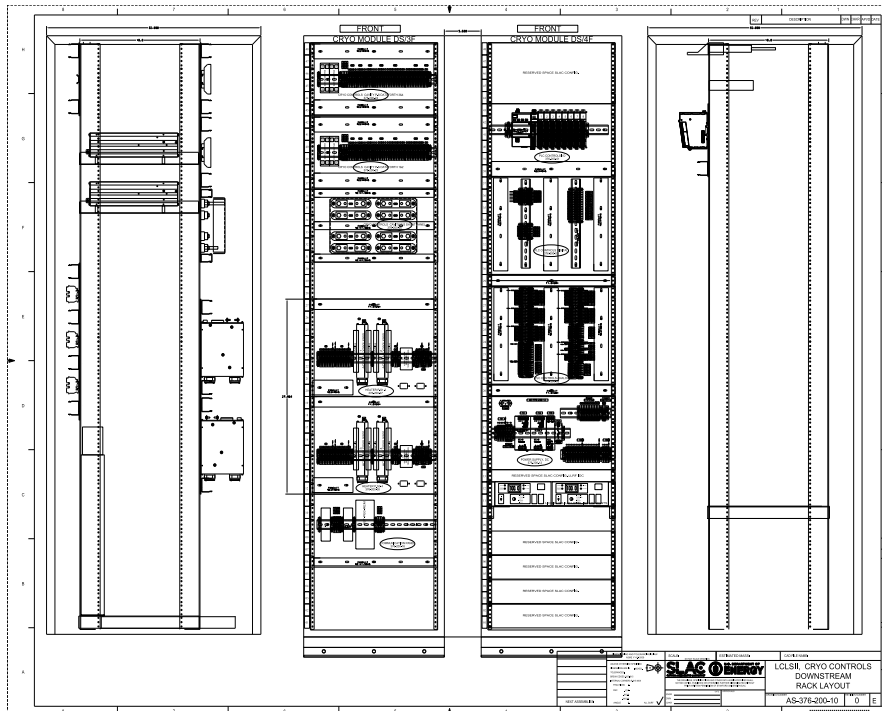
Two sets of SSAs with LLRF & Network & Vacuum racks



Vacuum and Cryo Racks are now located to the right in zone 2

# Cryogenic Control Racks – should arrive early March

- There are 2 double racks per cryomodule each 48" wide
  - These will be reduced to 4 racks total
  - These racks will be located in the gallery Zone 2
  - Reduces cable length and installation expense



One set of cryogenic control racks



# SSAs to Move to Gallery Thursday, Feb 1, 2018

- [https://wiki.jlab.org/lerf/index.php/Cryomodule\\_Waveguide\\_Layout](https://wiki.jlab.org/lerf/index.php/Cryomodule_Waveguide_Layout)



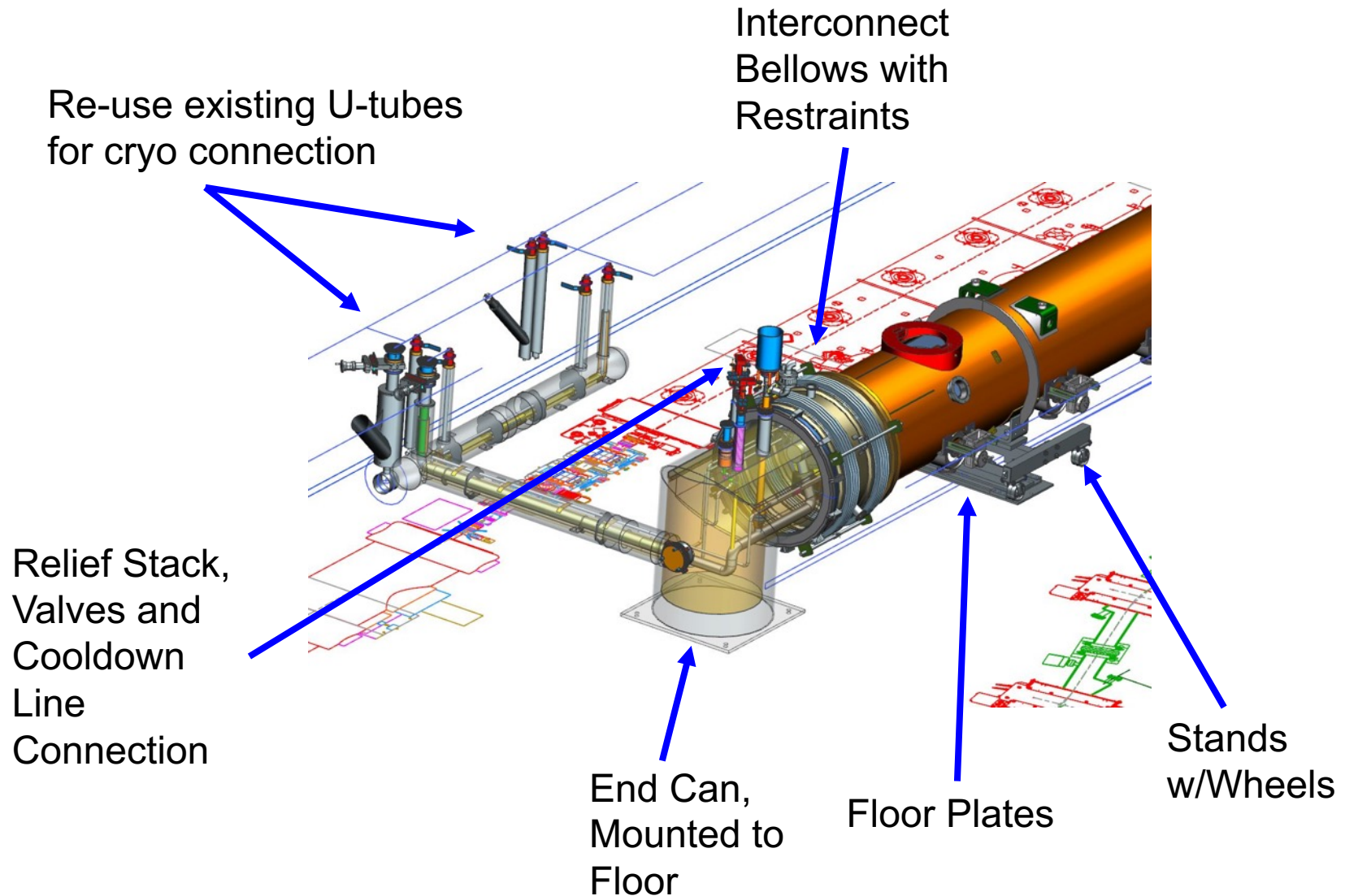


# Cables, Connectors, & Cryo Parts

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- Cryomodule connectors have been ordered and are arriving
- I am going through all cabling in detail considering excess cable
  - By end of week I should have an updated spreadsheet
- End cans, stands, and wheels are on order
- Cryo can procurement split & nearly ready to go out

# Cryo Can & U-tubes

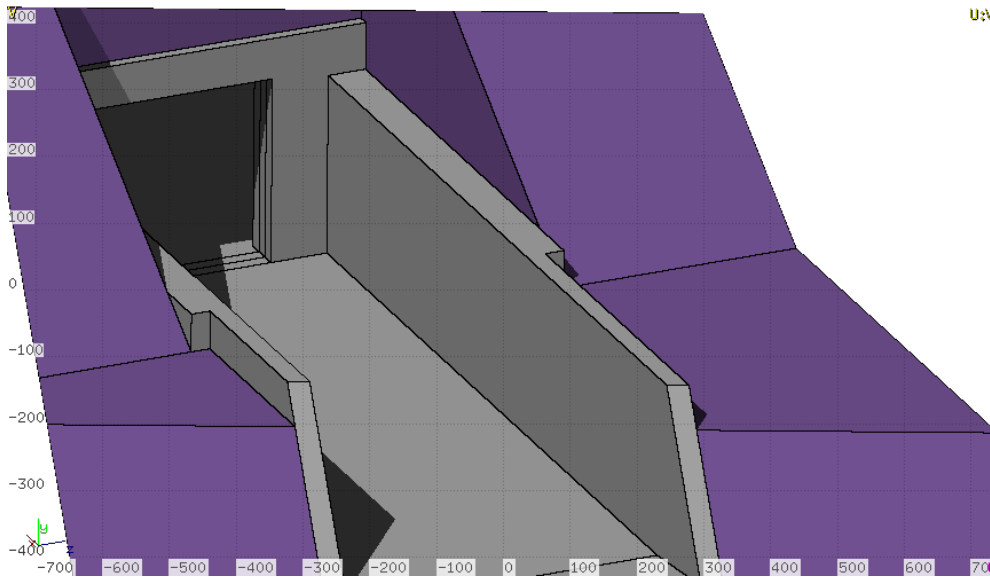


- Fourth design review Jan. 22, 2018



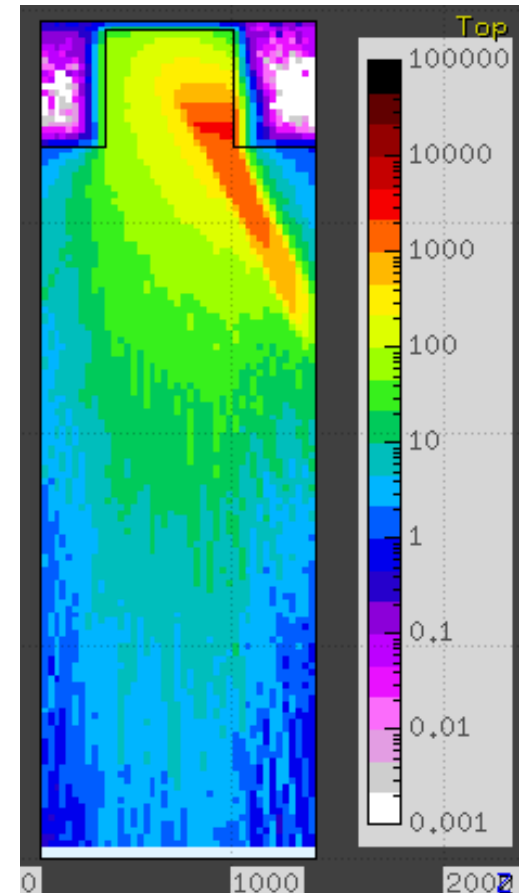
# Radiation Shielding Review

- Radiation safety assessment in progress
  - I would rather not place/remove all 27 shield blocks each time



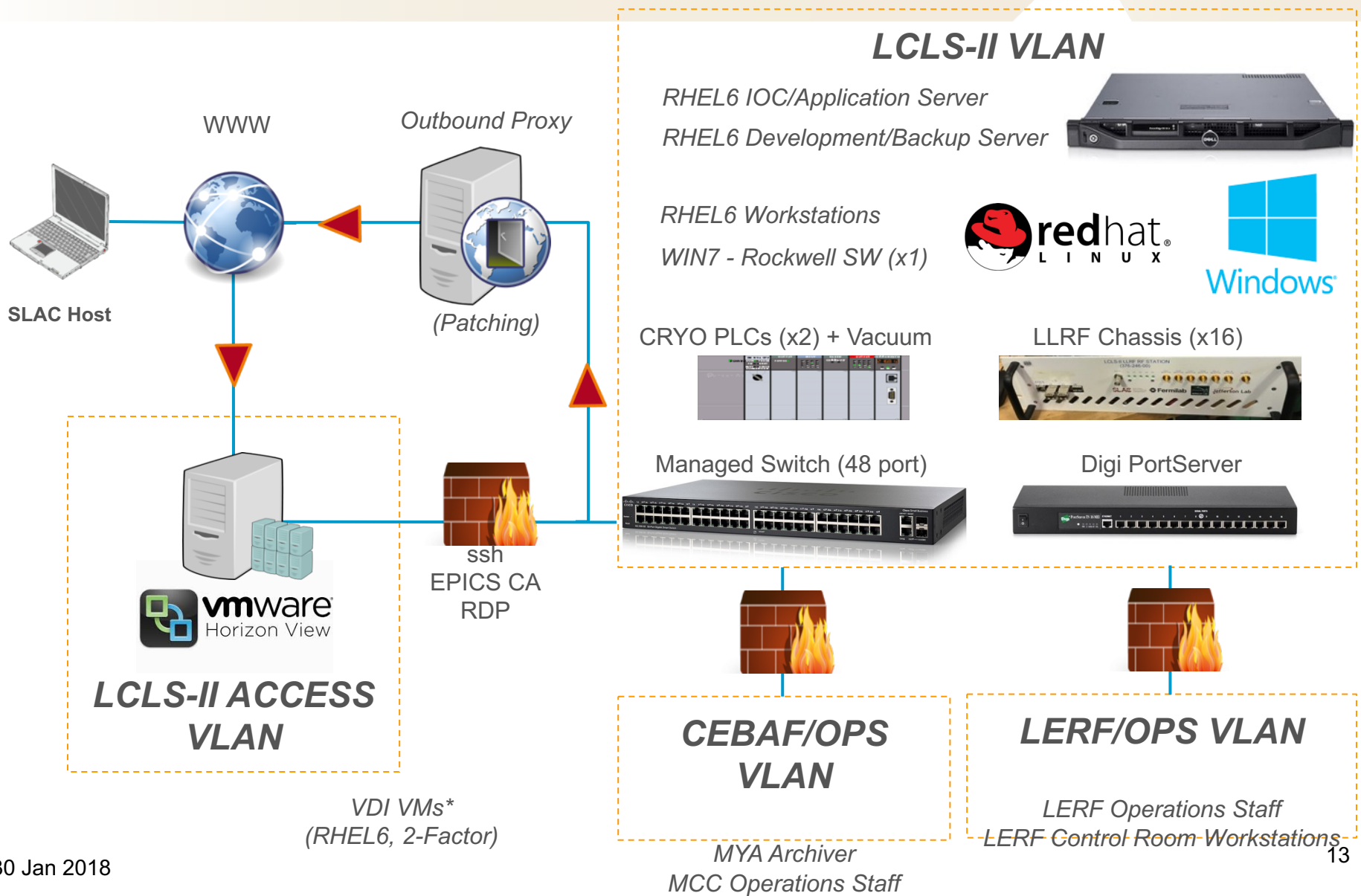
Model of the truck ramp

Unshielded ramp - horizontal





# Network & Computer Architecture (Draft from W. Moore)



## Plan of Attack! (from 14, Nov. 2017)

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- First get the network & software infrastructure operational
  - My hope is to have two-factor access to a machine on the new network before Christmas – “Hello World” - **Done**
  - From there able to get remote PLC programming operational both for vacuum & cryo controls **Done**
- Get cable procurements awarded **Connectors here/on order, cabling review/plan should be complete this week**
- Get cryo can design complete & awarded
  - **NOT done yet – this is critical path**
- Focus on getting the connections from SSAs to CM in the position #2 (next to cryo-can)
  - **Since waveguide & SSAs are here no need to stage CM 2 first, we are ahead of schedule for waveguide installation**

# Status Update

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- WIKI is the repository for status & documentation
  - <https://wiki.jlab.org/lerf/index.php>
- Cryo Can had multiple reviews – need to complete packages
- Waveguide continues to arrive weekly
- Network up & operational; “lclsnet”
- Cryomodule shuffle complete
- RF cables & connectors delivered
- Computer architecture being implemented