

Target Updates

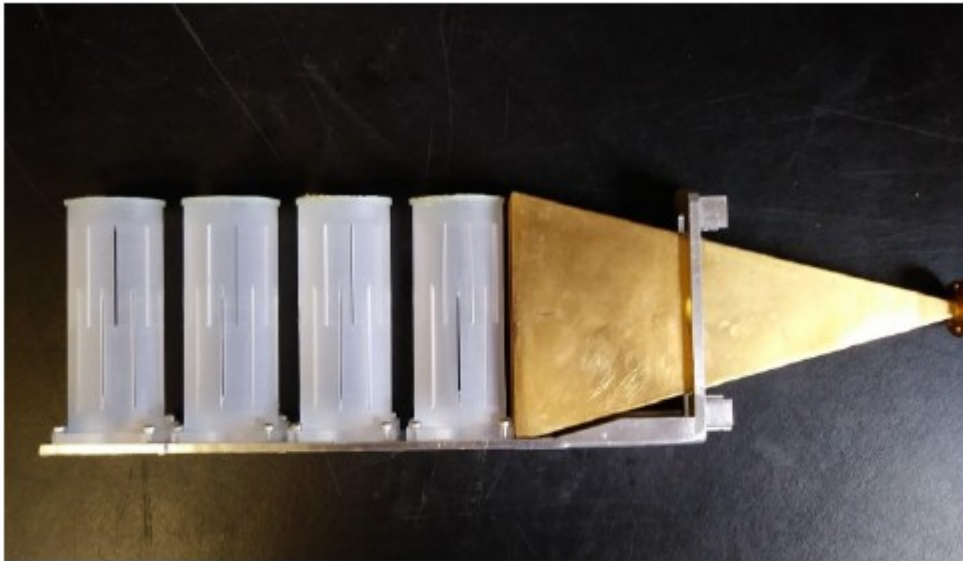
UVA

Additional Uncertainties in Pol

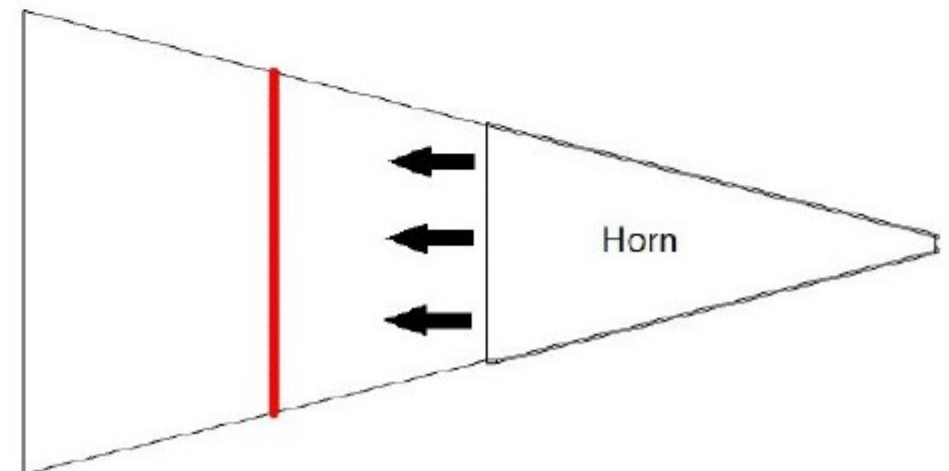
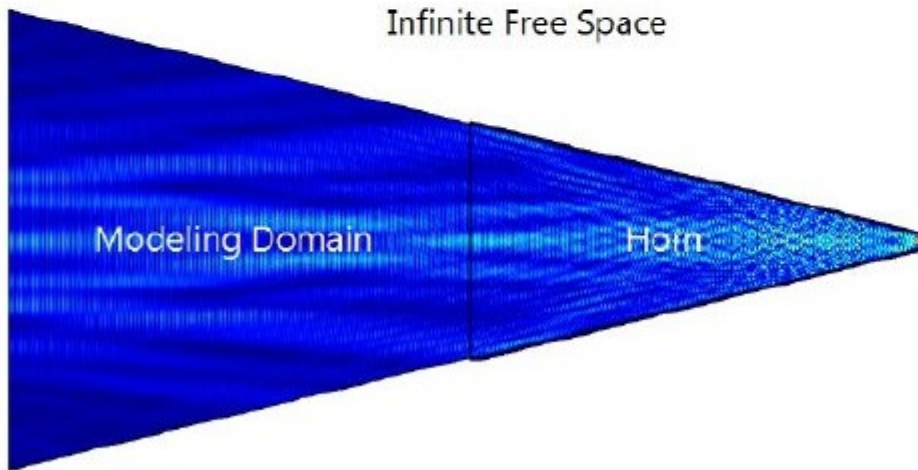
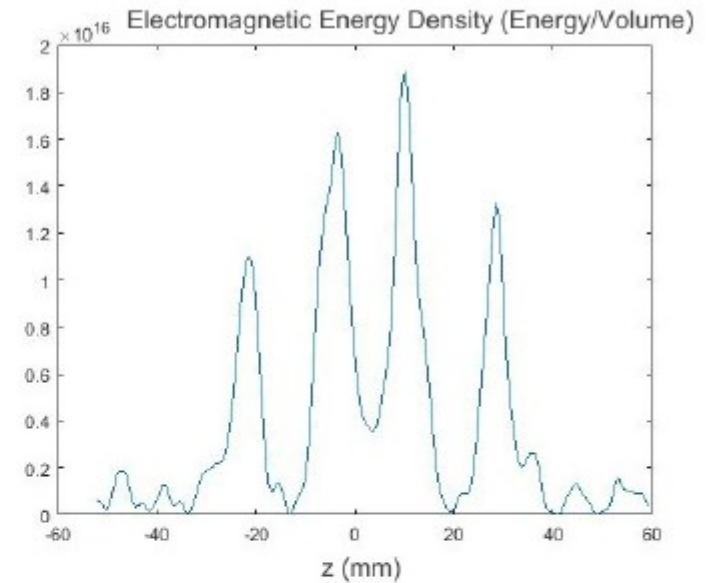
- Two major concerns about polarization inhomogeneity
 - Microwave profile disparity along z-axis length
 - Radiation damage down stream

How bad is it and what can we do?

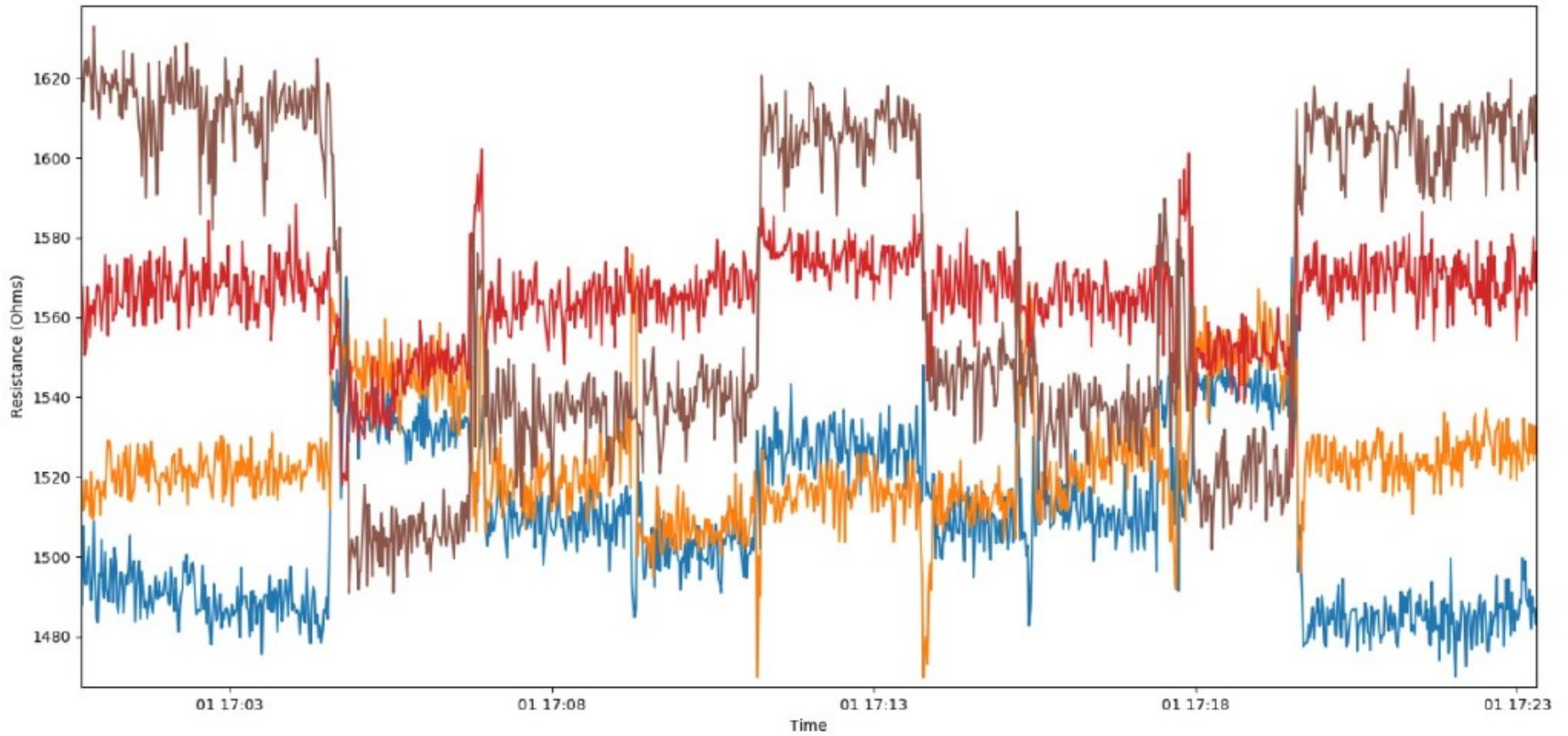
Microwave Profile Issues



Infinite Free Space



Microwave Frequency Dependence



What we think we know

- Power is low for the amount of material
- As much as 30% of the microwave can be reduced if cell above is at resonance
- Much better performance when microwave can bounce around in the nose cavity
- Better performance when no other metals or absorber is in the way
- There is a frequency dependence to the microwave profile

Additional Uncertainties in Pol

- Two major concerns about polarization inhomogeneity
 - Microwave profile disparity along z-axis length
 - Radiation damage downstream

How bad is it and what can we do?

- From previous cooldowns as much as 10% deviation: but limited data
- With radiation damage induced disparity the total polarization uncertainty is 11% relative

What Can Help

- Metal reflectors positioned just right
- Smaller and few target cells: sys/stat
- Frequency modulation

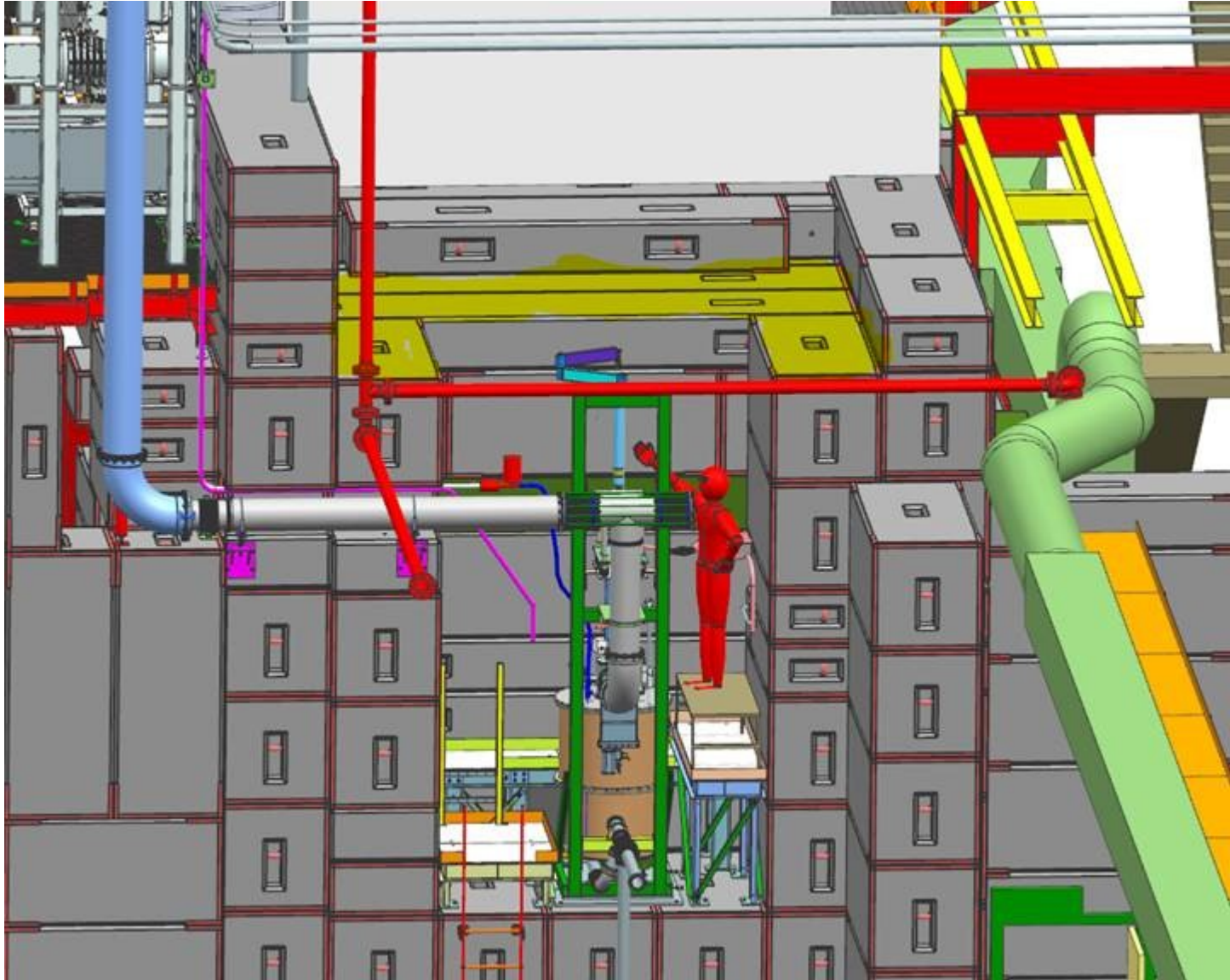
Other Updates

- Test nose pieces – now
- Fridge valves are fixed and need cold test
- He-3 probe fixed and need cold test
- Web page being updated with instructions and parts for parts info
 - Need work on slow controls
 - Need work on NMR: software, warm/cold tests
 - Magnet power supply/software

Other Questions

- Where will we store our material dewars at FNAL
- Who is in charge of:
 - Construction of Actuator setup: info exchange
 - The target-insert crane
 - The green frame: Final dimensions
 - The beam-target vac manifold: Connection to turbo and access ports
 - Is there a list of contacts for each remaining part of infrastructure
- Need Lakeshores here 218 Temp monitors
- Final design, operational specifications and needs of the liquefier system: how to setup quench ports
 - Enclosed, liquefier can handle pressure, top connections needed
 - Or just loose that helium, how many quenches could we afford?

FNAL Cooldown



Getting LHe into cave

