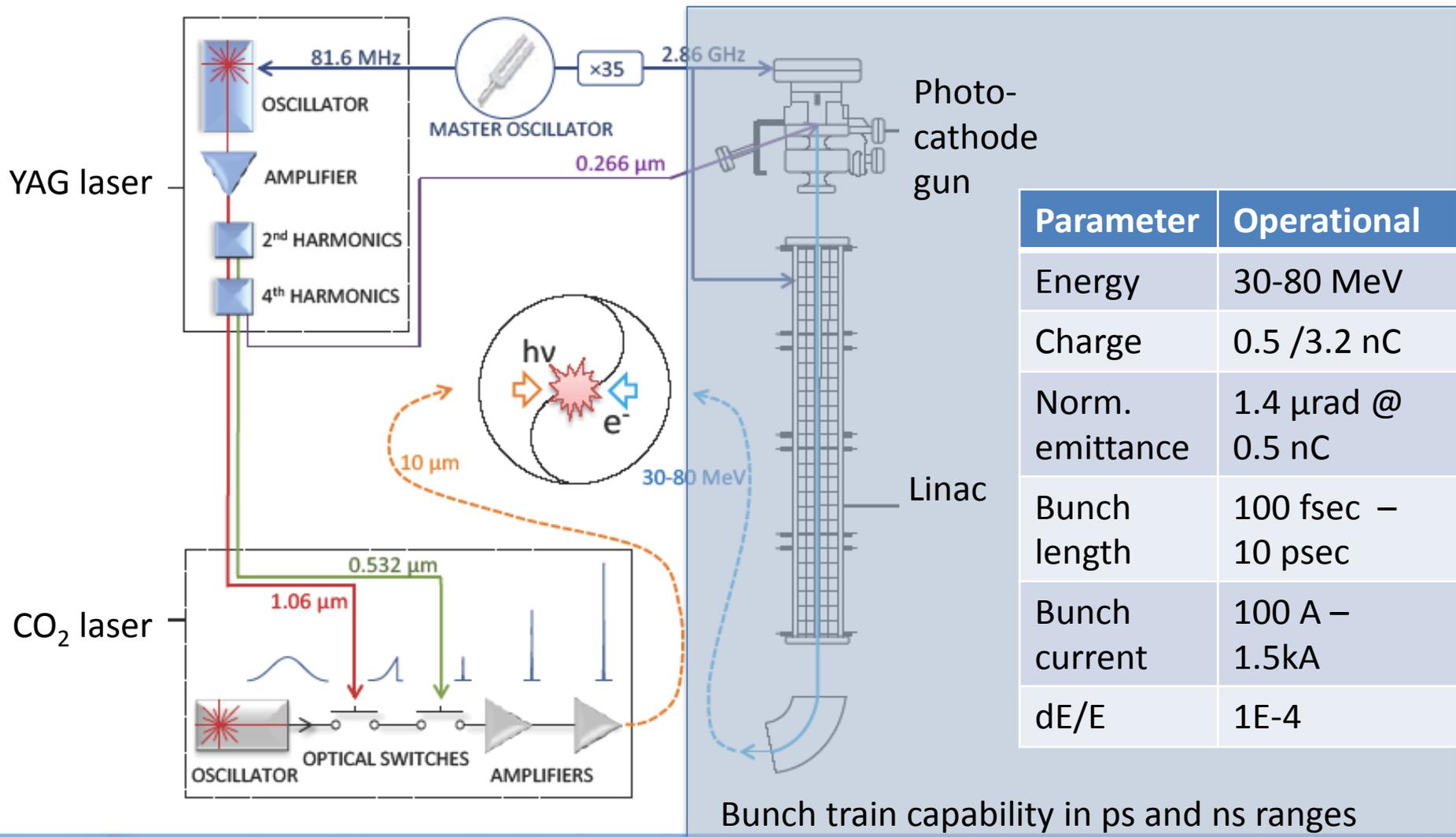


# Introduction to ATF II e-beamlines

*Mikhail Fedurin*

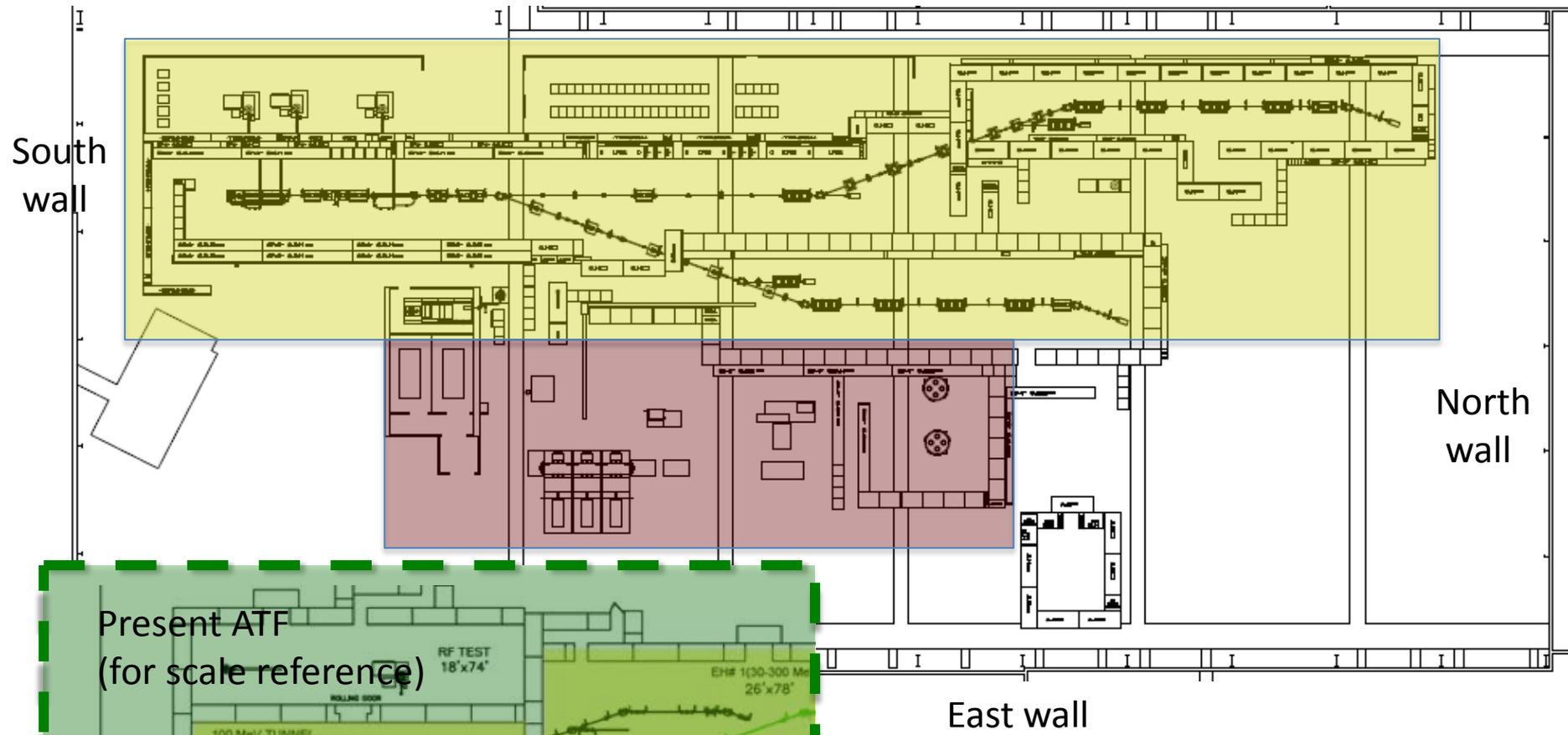
*October 28, 2015*

# Present ATF -unique combination of laser and electron beams



# ATF II layout in building 912

West wall



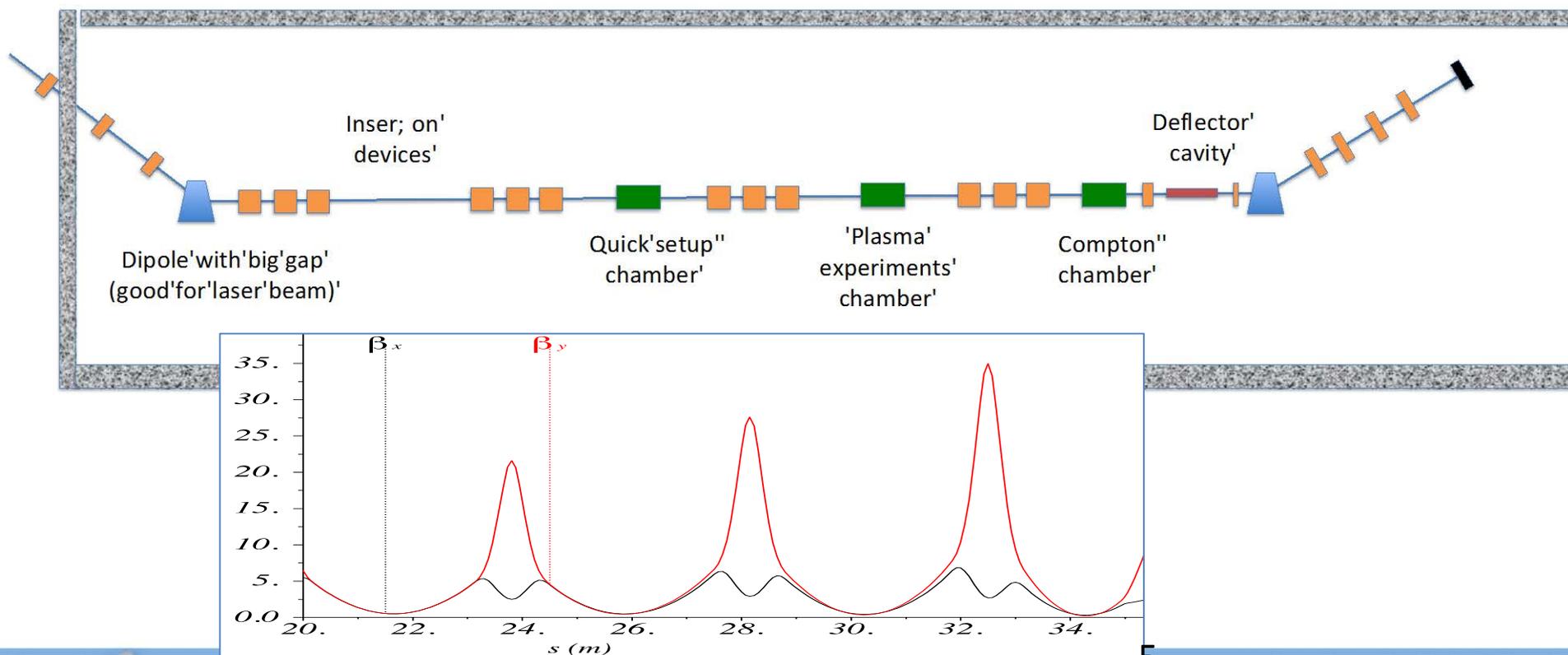
Present ATF  
(for scale reference)

East wall

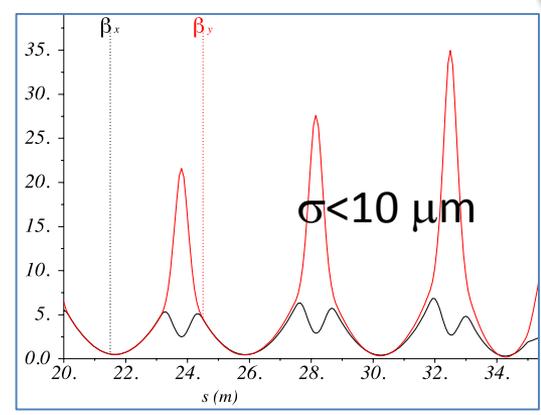
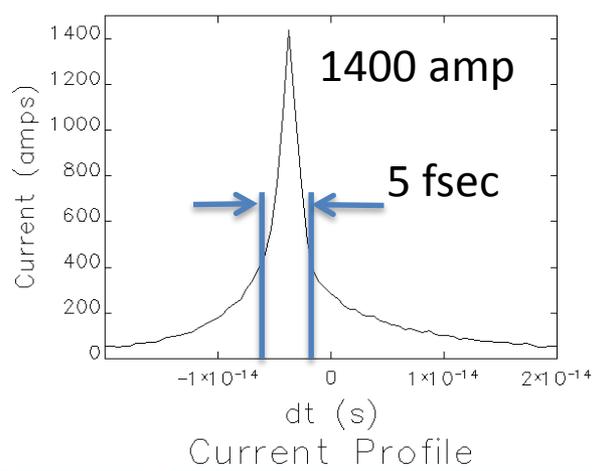
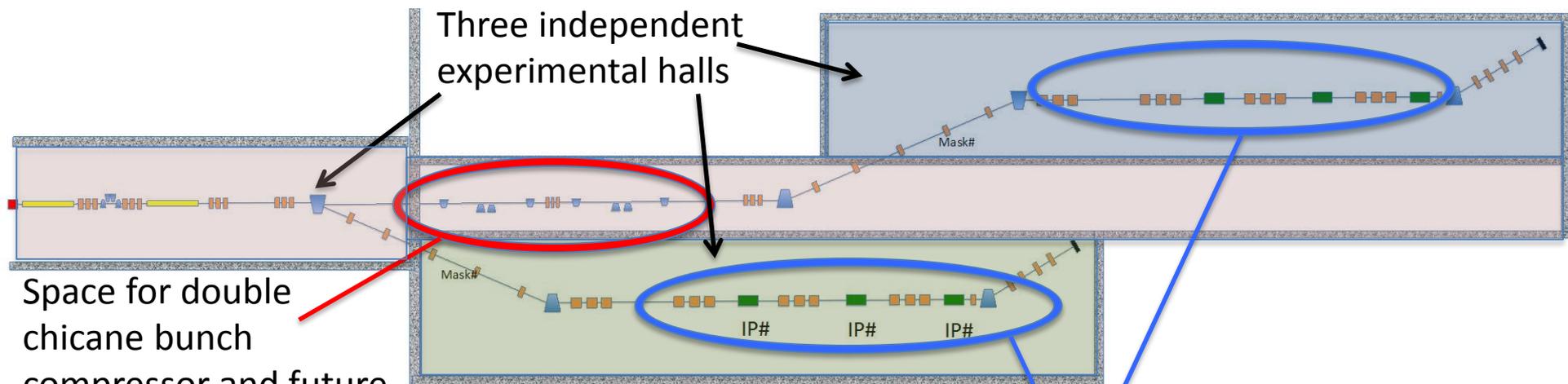


# ATF II beamlines.

## Stage 1 beamline population map



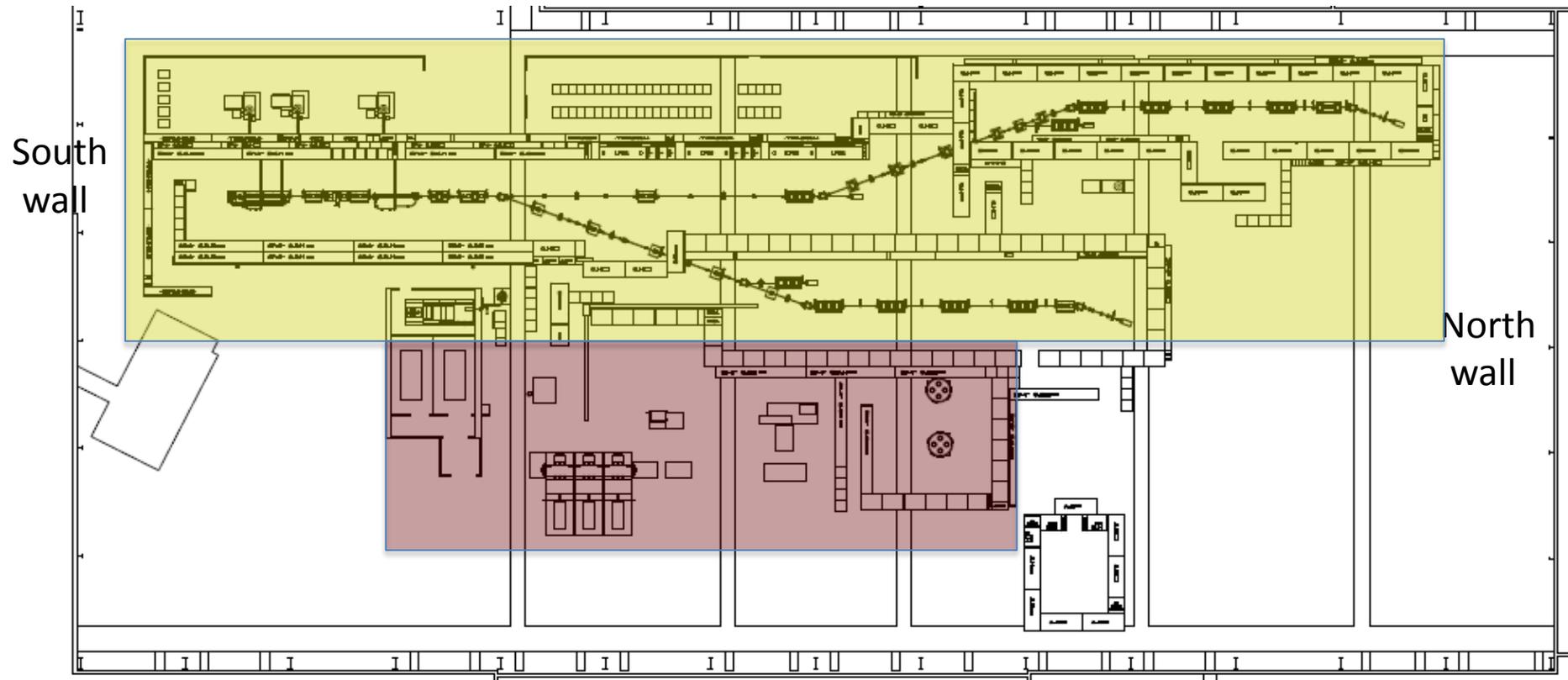
# ATF II beamlines. Future perspectives.



Two independent halls with multiple IP and experimental stations.

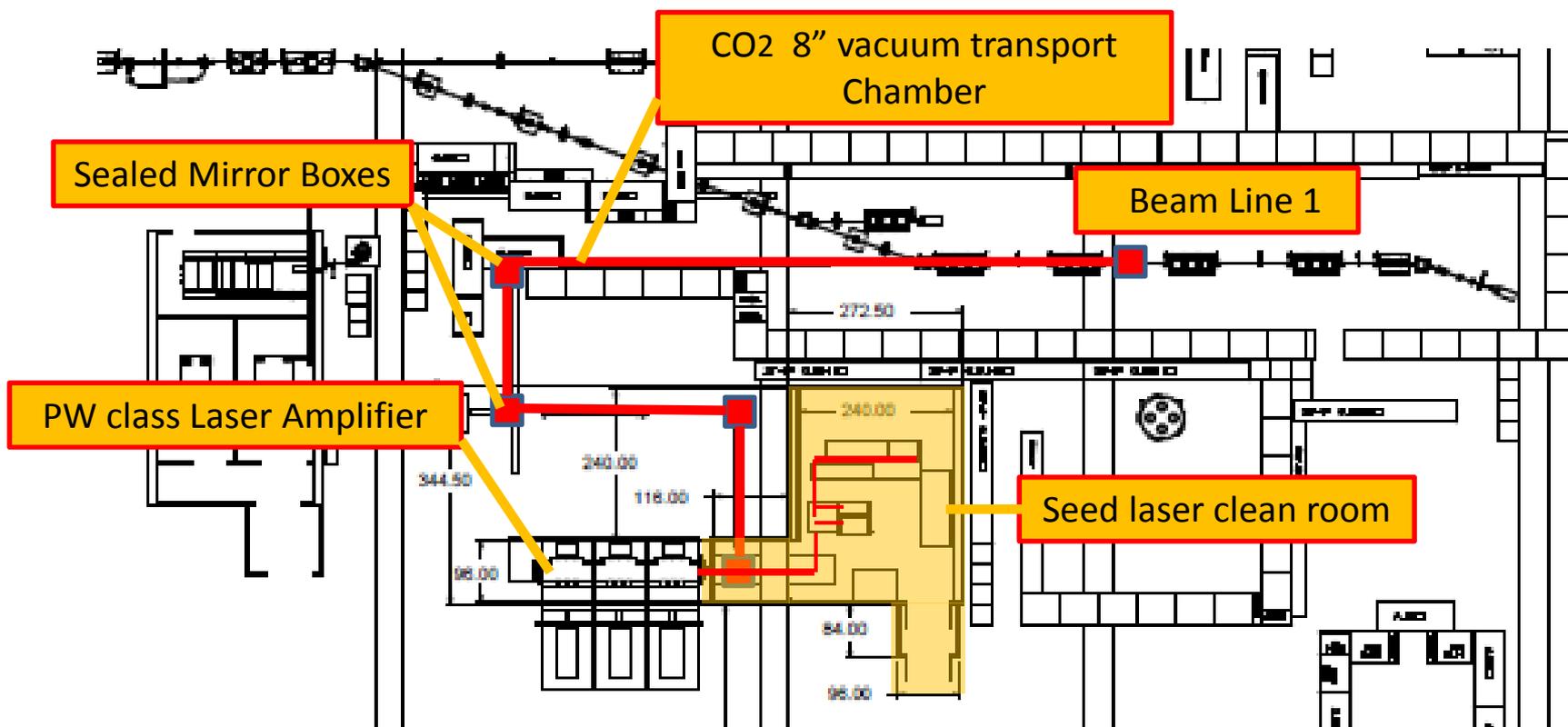
# ATF II layout in building 912

West wall



East wall

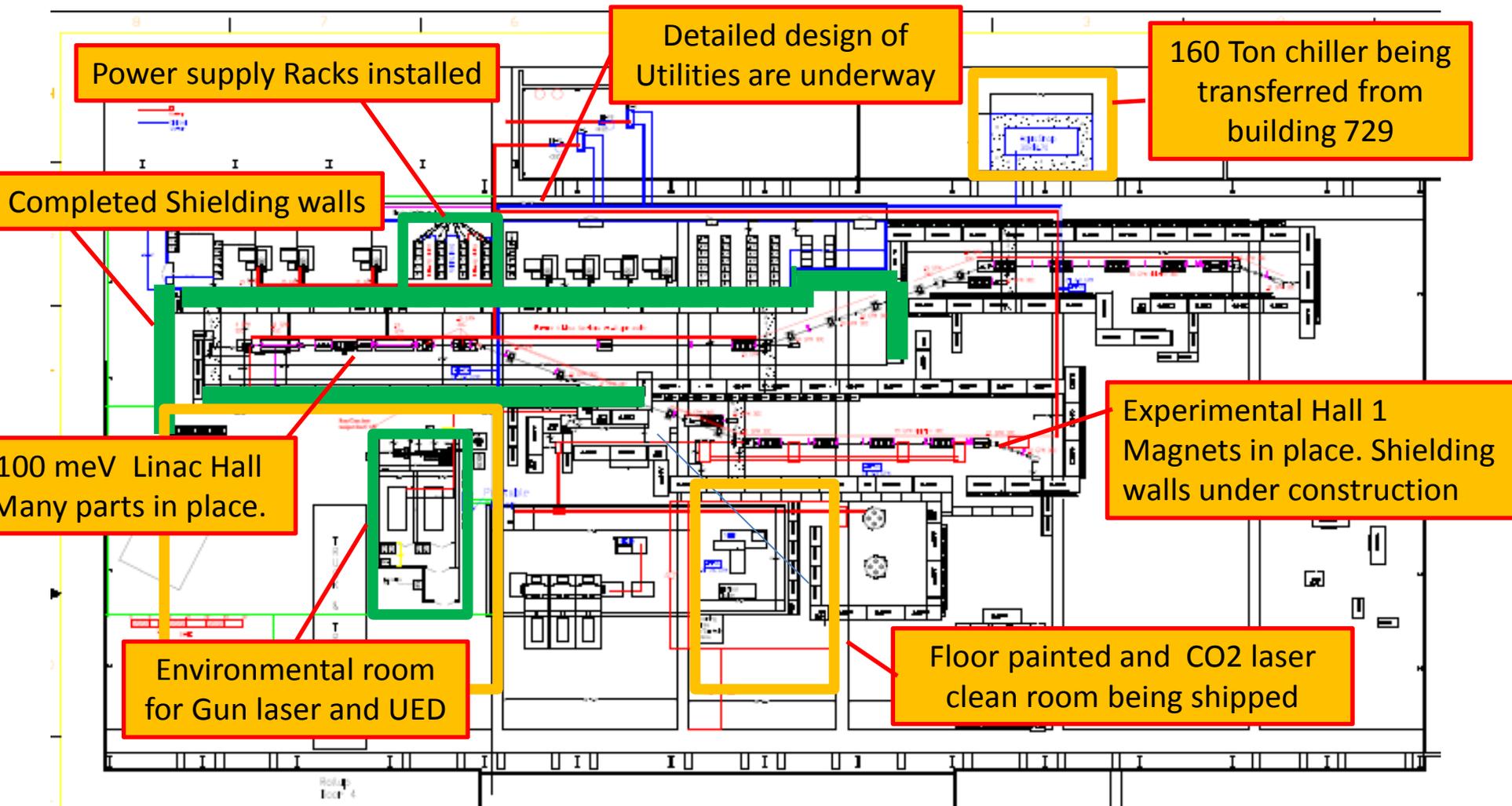
# Proposed Day One CO<sub>2</sub> Transport Line





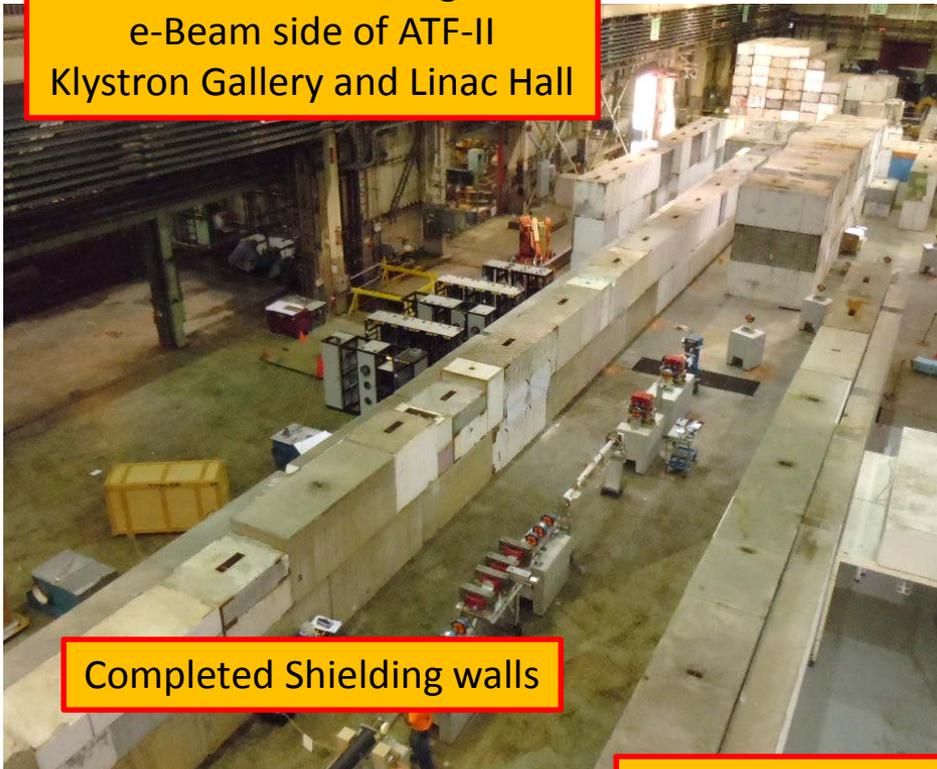
# Present status of construction

# Status of Shielding Walls and Conventional Facilities



# View of ATF-II Facility Preparation taking place in Building 912

West Side of building 912  
e-Beam side of ATF-II  
Klystron Gallery and Linac Hall



Completed Shielding walls

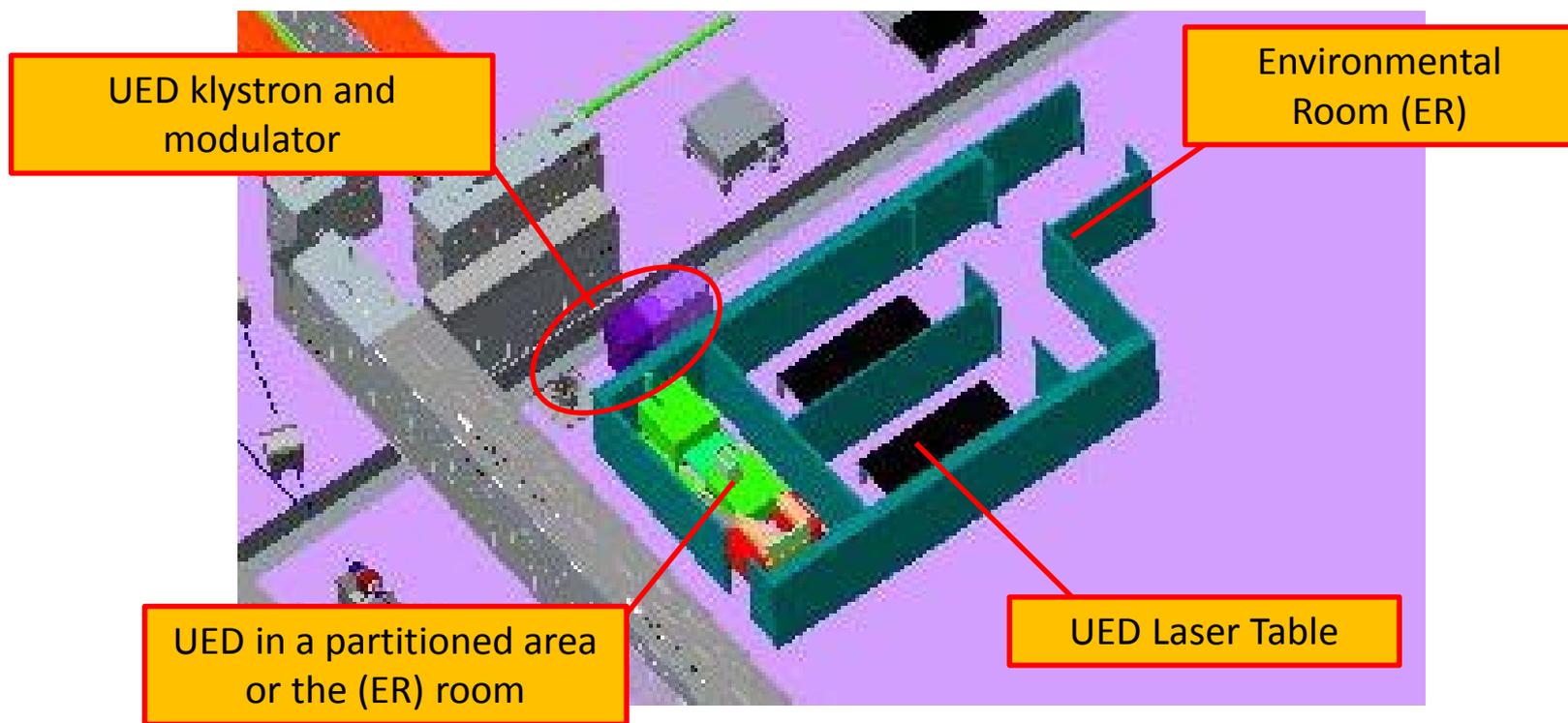
East Side of building 912  
Laser side of ATF-II  
Solid state and CO<sub>2</sub> Laser Areas



Environmental room  
for Gun laser and UED

Equipment is being transferred  
storage areas around the  
Laboratory to 912

# UED to be located in the Environmental Room in Building 912



First two Klystrons and parts of a third have been installed and all required waveguide have been identified or are on order



Most of the used Capacitors in the Modulators will need to be returned to the manufacturer General Atomics for maintenance and repair.

# Repurposed Beam Line Components for ATF-II

Photocathode Gun and linac sections.



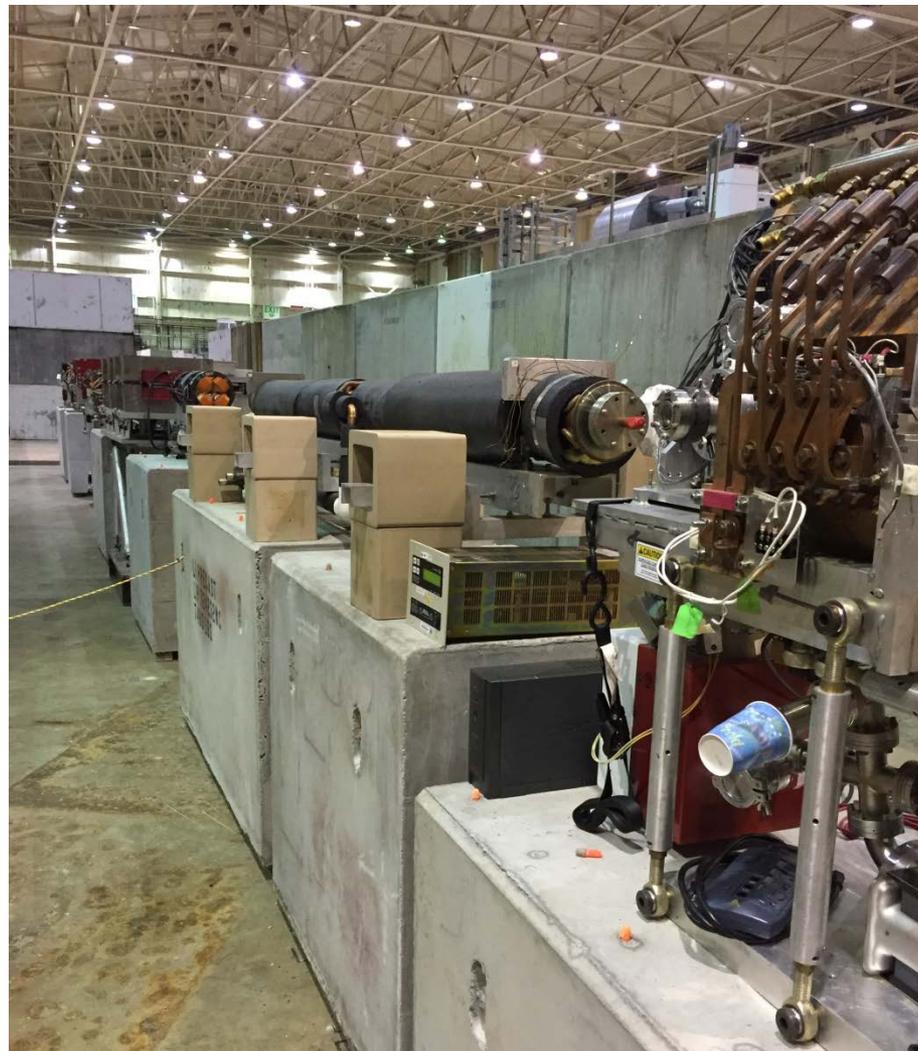
Quadrupole Triplet and Chicane Magnet



All magnets needed for Beam Line 1 are either located on the beam line, on order or are available.

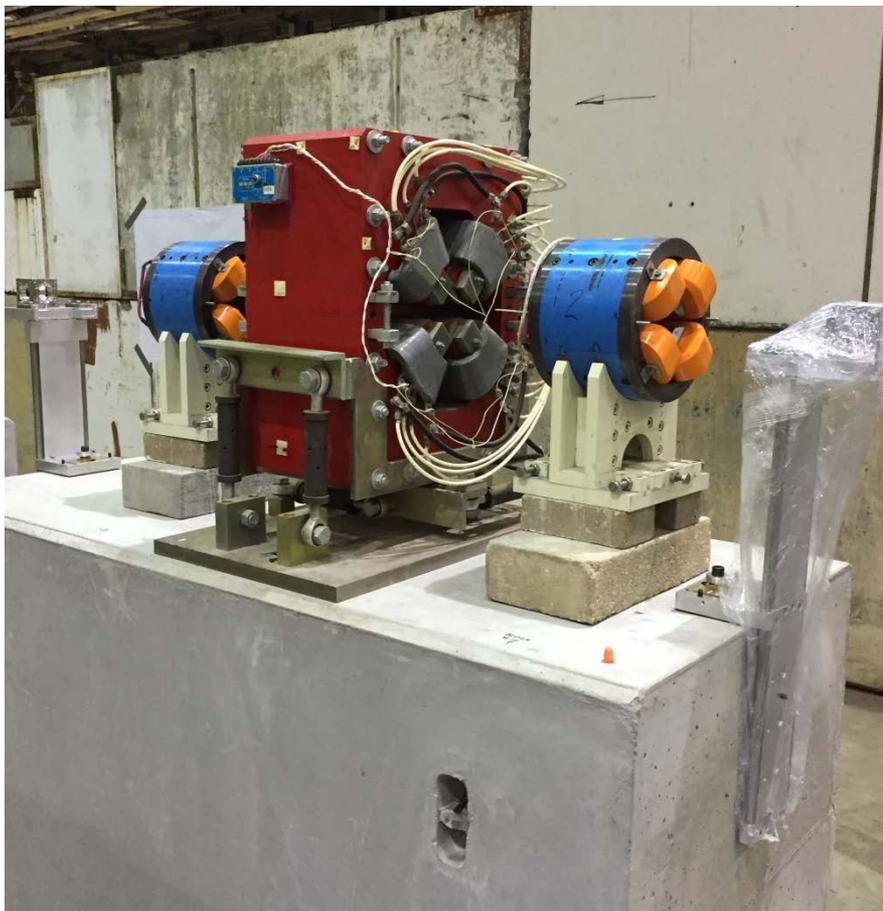


# Repurposed Linac Sections Assembled onto the ATF-II beam line

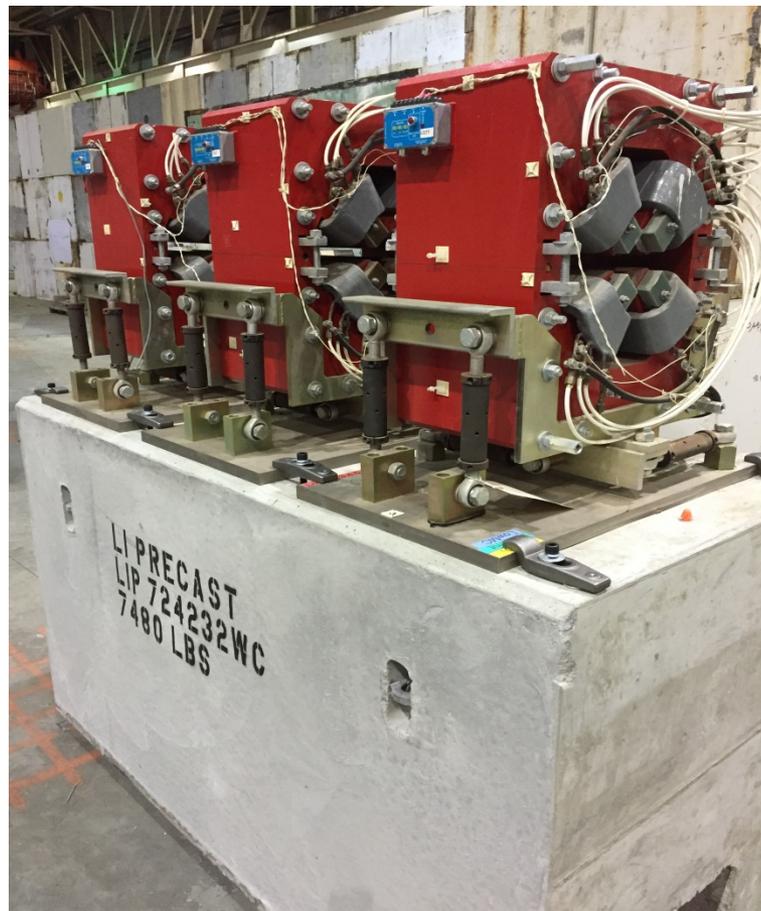


# Views of Magnet Triplet Assemblies

ATF and Bates Quadrupole used in Linac

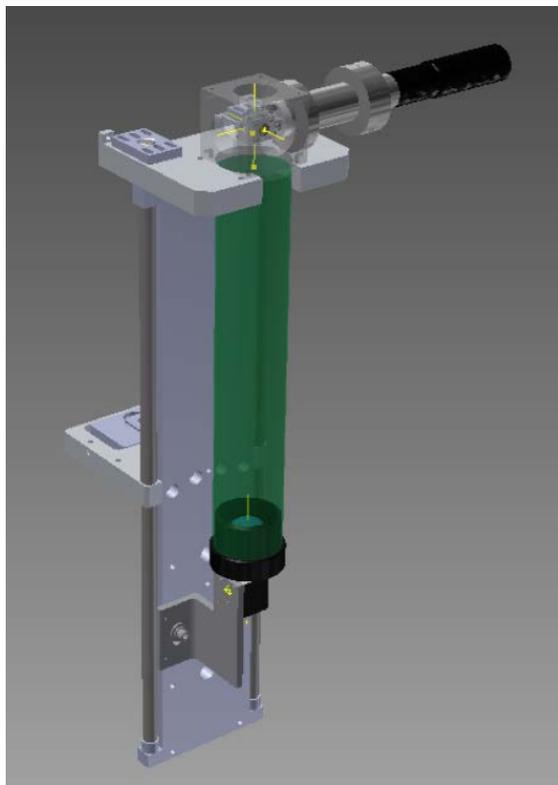


MIT Bates Quadrupoles for Beam line 1



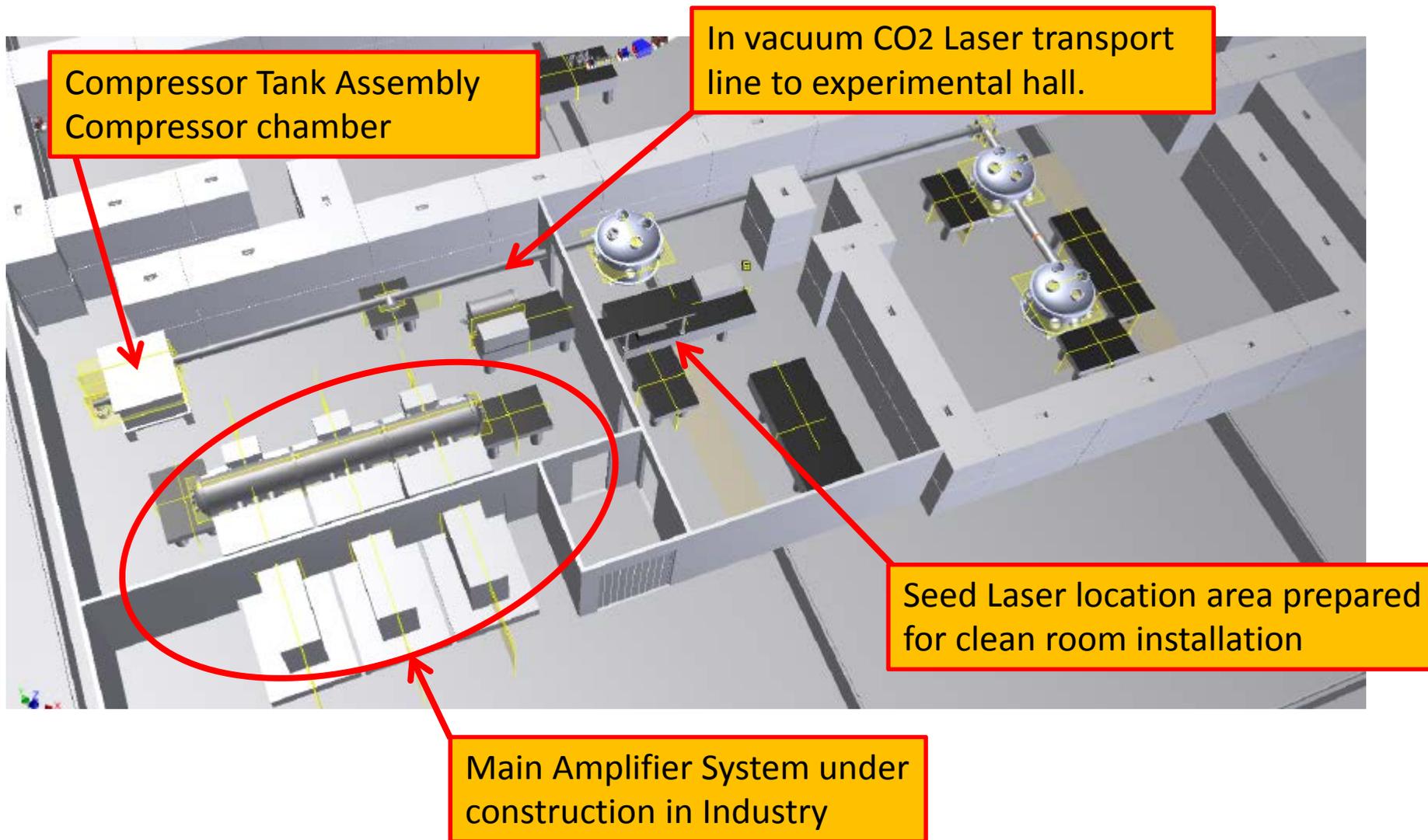
# e-Beam Diagnostics

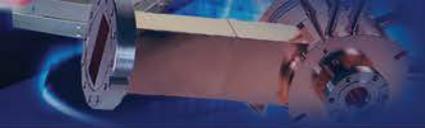
## BPM Designed, Parts Manufactured



BPM Cube mounted to Zero CTE bracket support,  
Vacuum components prototyped and many system components have already been  
ordered. All triplet beam tubes for the linac and Beam line 1 are in route to BNL

# Status of the ATF-II CO<sub>2</sub> laser Lab Layout





Thank you!