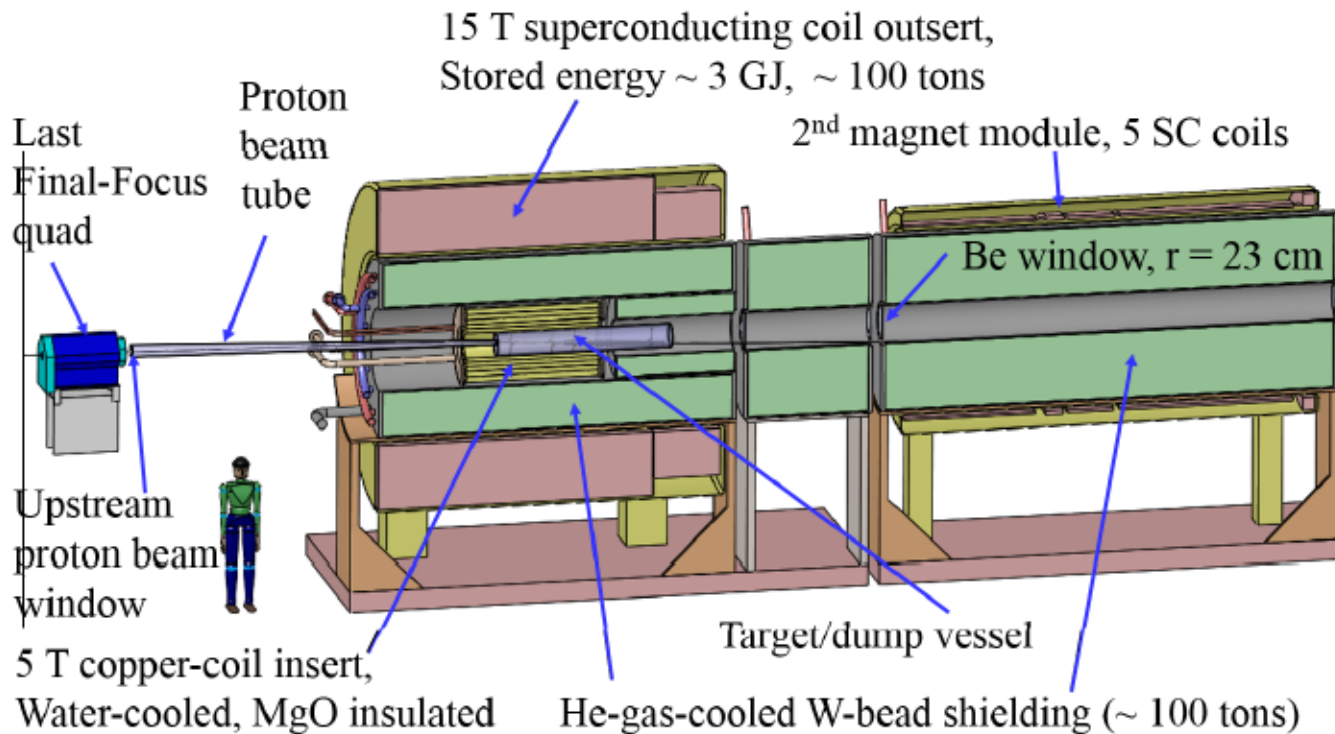


Front-End Status

Diktys Stratakis

July 9, 2014

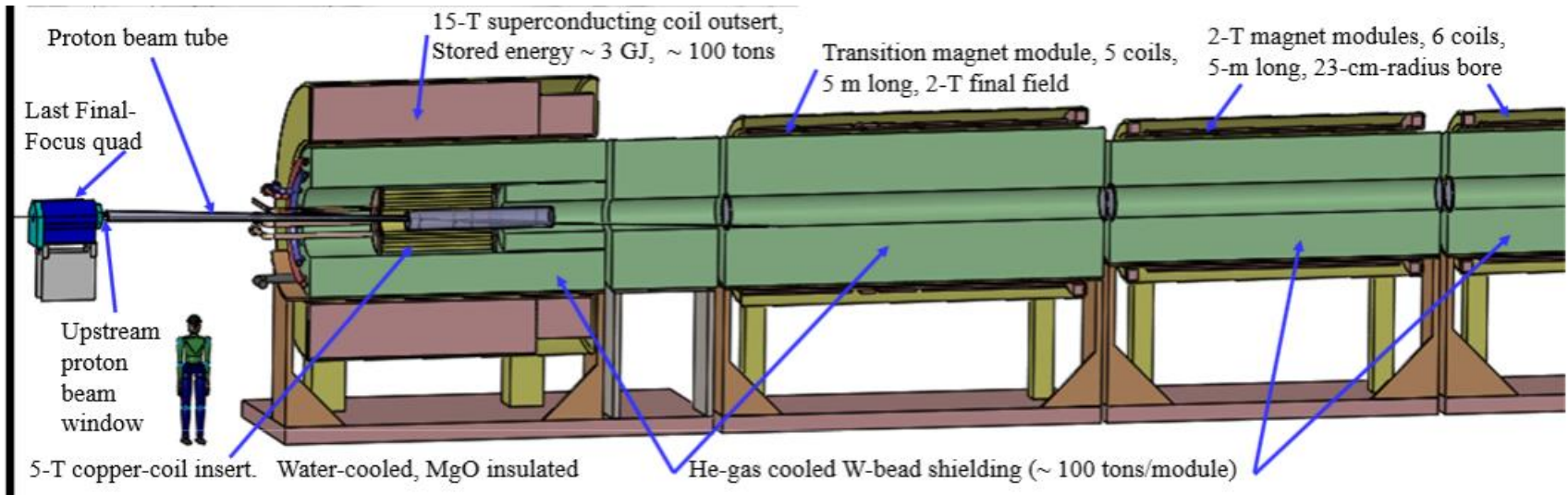
Target Overview



Parameter	Units	Value
Target (and proton dump) material		Graphite (or carbon-carbon composite)
Target density	g/cm^3	1.8
Target length	cm	80
Target radius	cm	0.8
Target (and beam) tilt angle	mrad	65
Dump length	cm	120
Dump radius	cm	2.4

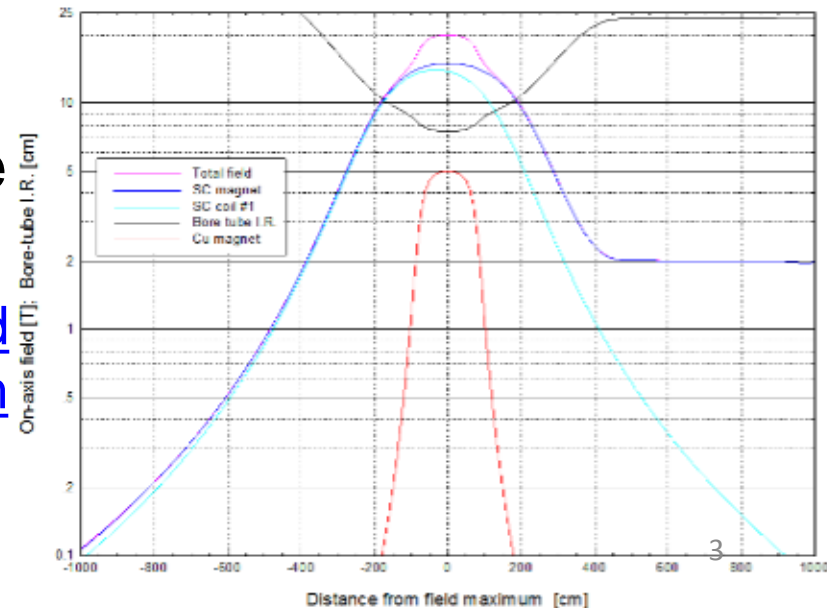
Parameter	Units	Value
Proton beam kinetic energy	GeV	6.75
Proton beam rep. rate	Hz	60
Proton pulse rms length	ns	3
Final solenoid field	T	2
Final radius of secondary beam	cm	23

Target Magnets



- 5 m short taper from 20 T to 2 T
- Parameters of the magnet coils are given here:

– www.hep.princeton.edu/%7Emcdonald/mumu/target/weggel/20to2T5m120cm4pDL.xlsx



Where we stand

- Following the IBS deadline chart we submitted on June 2 a report on the concept specification on target, solenoid, dump. The report can be found here:
 - http://www.hep.princeton.edu/mumu/target/target_concept_140602.pdf
- Target Details can be found here:
 - <http://jacow.web.psi.ch/conf/ipac14/prepress/TUPRI008.PDF>
- Target solenoid details can be found here:
 - <http://jacow.web.psi.ch/conf/ipac14/prepress/THPRI087.PDF>
- Target Optimization details can be found here:
 - <http://jacow.web.psi.ch/conf/ipac14/prepress/THPRI089.PDF>
- Generated input distributions for the new target parameters (X. Ding)

Next Steps (next three months)

- Continue energy deposition studies for the target
- Optimize decay channel and chicane with the new parameters
- Tune buncher and phase-rotator for the new parameters (partially)
- Deliver concept specification report for chicane, buncher and rotator (due 10/2014)
- Initiate energy deposition studies for the chicane and downstream