Mucool Transverse Shielding
Experiment Mode

Beam to Experiment in MTA Hall

7/13/2010

Base Primary Beam Energy (GeV):	1000.00
Base Primary Beam Intensity (protons/pulse):	2.00E+13
Base Cycle Time (sec):	57.00

Scaling assumes tenfold attenuation length of 2.8 efd, energy scaling exponent of 0.8.

Primary Beam Energy (GeV):	**0.4**
Primary Beam Intensity (protons/pulse):	**1.60E+13**
Secondary Beam Energy (GeV):	**0.4**
Secondary Yield:	**1.00E+00**
Accelerator Cycle Time (sec):	**60**
Protons per hour:	9.60E+14
Pulses allowed by interlocked detectors per hour:	**15**

Beamline Station	Enclosure Type	Beam Type	Removable Shielding (e.f.d.)	Beam Elevation (ft)	Current Shielding (e.f.d.)	Limits Shielding Category	Standard (e.f.d.)	Required (e.f.d.)	Difference (ft)	Possible Solutions	After Solutions	Fail?	Reference Drawings
15	C-Magnet	P		740.0	13.0	7A	15.2	10.6	2.43				9-4-1-35 C-2 sec. B
45	13-ft Ceiling	P		740.6	11.9	7A	15.2	10.6	1.33				9-4-1-35 C-2 sec. C
57	10-ft Ceiling	P		741.5	14.2	4A	15.0	7.1	7.15				9-4-1-35 C-2 sec. D
104	Beam Stop Alcove	P	18.1	741.9	18.1	4A	15.0	7.1	11.05				2130.000-ME-391334 Cross-Section E
110	Hatch Waveguide	P	21.7	741.9	21.7	4A	15.0	7.1	14.65				2130.000-ME-391334 Cross-Section A
110	Hatch Waveguide	P	21.7	741.9	21.7	4A	15.0	7.1	14.65				2130.000-ME-391334 Cross-Section B
112	Hatch Waveguide	P	21.7	741.9	21.7	4A	15.0	7.1	14.65				2130.000-ME-391334 Cross-Section C
115	Hatch Waveguide	P	21.7	741.9	21.7	4A	15.0	7.1	14.65				2130.000-ME-391334 Cross-Section D
135	MTA Stub	P		742.0	10.4	4A	15.0	7.1	3.35				9-4-1-35 C-3 sec. F
157	MTA Exp Hall	P		742.5	10.2	4A	15.0	7.1	3.15				9-4-1-35 C-3 sec. G
167	MTA Rollup Door	P	15.0	743.5	15.0	4A	15.0	7.1	7.95				9-4-1-35 C-3 sec. G

	Name & Date	
Originated	W. Higgins	27-Apr-10
Checked		

Past Solution Key

IM = Interlocked Intensity Monitor: equiv. to 2 ft. dirt
NH = "No Hit:" Large beam pipe precludes losses
RT = "Red Tag:" Administrative controls on changes to area
n = Calculation of specific geometry gives n feet credit