

ANU Design Parameters			
Nominal Values			
	Proton Plan	ANU	
<b>Booster</b>			
Extracted Batch Intensity	4.3E+12	4.3E+12	protons
Average Pulse Rate	5.9	10.5	Hz
Average Beam Rate	5.0	9.0	Hz
Norm. Trans. Emittance at Extr.	15	15	$\pi$ mm·mrad @ 95%
Long. Emittance per Bunch at Extr.	0.08	0.08	eV·sec @ 95%
$\delta p$ (After Bunch Rotation)	8	8	( $\pm$ ) MeV/c @ 95%
<b>Recycler Ring</b>			
Number of Injections		12	injections
Total Beam Injected		5.16E+13	protons
Injection Kinetic Energy		8	GeV
Injection RF Frequency		52.809	MHz
RF Frequency Difference		1260	Hz
Extraction RF Frequency		52.809	MHz
$\delta p$ at Extraction		19	( $\pm$ ) MeV/c @ 95%
<b>Main Injector</b>			
Number of Injections	11	1	injections
Cycle Time	2.2	1.333	s
Beam Momentum at Extraction	120	120	GeV/c
Beam Intensity at Extraction	4.5E+13	4.9E+13	protons
Norm. Trans. Emittance at Extr.	20	18	$\pi$ mm·mrad @ 95%
Long. Emittance per Bunch at Extr.	0.4	0.4	eV·s @ 95%
$\delta p/p$ at Extraction	8.E-04	8.E-04	( $\pm$ ) @ 95%
<b>MI/RR Tunnel Losses</b>			
8 GeV Beam Efficiency	95%	95%	
Controlled 8 GeV Loss to Abort	0.0%	1.9%	
Controlled 8 GeV Loss to Collimators	2.7%	1.8%	
Uncontrolled 8 GeV Losses	2.3%	1.3%	
Transition Losses (Upper Bound)	0.2%	0.2%	
Power Deposited in Abort	0	943	W
Power Deposited in Collimators	744	893	W
Distributed Uncontrolled Loss	0.23	0.27	W/m
<b>NuMI</b>			
Maximum Proportional Loss in Carrier Pipe	1.0E-05	5.7E-06	
Spot Size on Target	1.3	1.3	mm (RMS)
Max. Beam Intensity on NuMI Target	4.5E+13	4.9E+13	protons
Max. Beam Power on NuMI Target	392	705	kW
Protons per Hour	7.3E+16	1.3E+17	protons/hr.