

The most probable conditions for 2005 when NuMI starts up. The basic assumptions are:-

1. NuMI gets $5 \times 5e12$ per MI cycle. (per S. Holmes)
2. Slip stacking is available for Pbar production
3. MiniBooNE is limited by Booster rep rate issues
4. The dog leg problem is fixed which in combination with the new collimators allows $1.1e17$ p/hr through the Booster.

Program Requests							
Pbar	7.5E+19	p/year					
NuMI	2.3E+20	p/year					
BooNE	4.0E+20	p/year		10	batches @	5	Hz
CKM	2.2E+19	p/year		5.0E+12	p/second	6	sec slow spill

Up Time (fraction of year)

Booster	0.8
MI	0.6

Machine Parameters

22	clicks for MI acceleration
2	clicks for slip-stacking (used if Pbar batches > 1 or NuMI+Pbar batches > 6)
1	click added to MI cycle for debunching for CKM
2	Booster prepulses required before beam cycles
2	seconds minimum MI cycle time for Pbar

Constants

6.67E-02	seconds per Booster cycle
3.2E+07	seconds per year

Program	Booster Batches	Fraction of year allocated	Booster Beam Trains	Cycle time (sec)	Booster Intensity 5.0E+12 ¹	Booster Rate (Hz) 7.5 ²	Booster protons/hr 1.8E+17 ³
BooNE	10	0.20	1	2.00	4.6E+12	6.00	8.3E+16
BooNE	6	0.60	1	2.07	4.6E+12	7.26	1.1E+17
NuMI	5				5.0E+12		
Pbar	2				4.1E+12		
BooNE	0	0.00	0	0.00	0.0E+00	0.00	0.0E+00
CKM	0				0.0E+00		
Average of MI modes:						7.26	1.1E+17
# fast spill cycles per slow spill cycle:							0.00

- 1) Booster losses grow dramatically above 5e12 p/batch
- 2) Booster hardware is limited to 7.5 Hz rep rate
- 3) Booster Shielding Assessment is good for 1.8E17 p/hr

Slip-stacking?	TRUE
MI fast spill?	TRUE
MI slow spill?	FALSE